

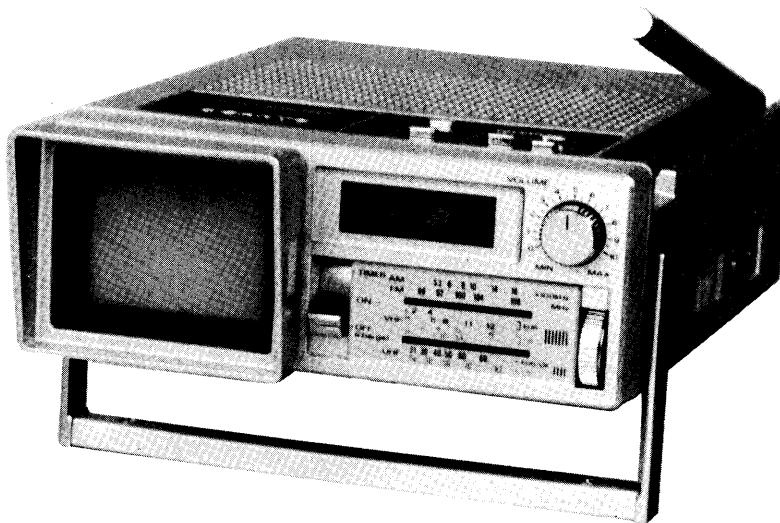
# SERVICE MANUAL

MINI B/W TELEVISION  
WITH AM/FM RADIO &  
DIGITAL ALARM CLOCK



## TPM 2140

(EUROPE - FTZ)

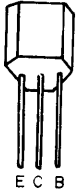
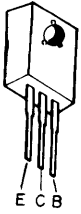
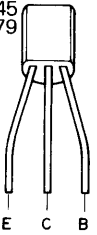
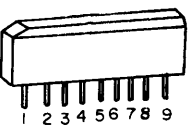
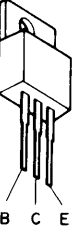
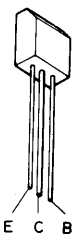
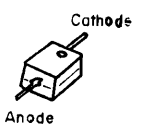
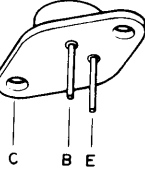
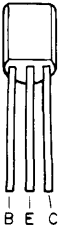
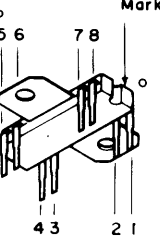
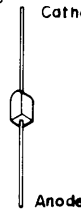
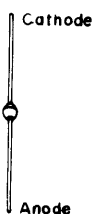
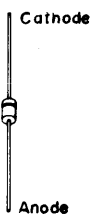
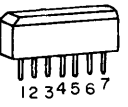
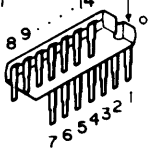

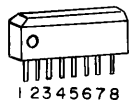
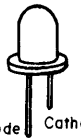
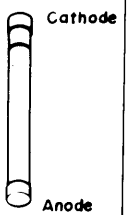
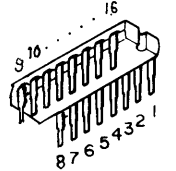


### SPECIFICATIONS

Television System	"I" "G" "B" type, 625 lines/frame, 25 frames/sec., 50 fields/sec. "M" type, 525 lines/frame, 30 frames/sec., 60 fields/sec.
Frequency Range	VHF Channels 2 - 12(EUR-system) 2 - 13(US-system) UHF Channels 21 - 69(UK, EUR-system) 14 - 83(US-system)
Antenna Input Impedance	AM 530 - 1,605 KHz FM 87.5 - 108 MHz
Intermediate Frequency	75 ohm TV: Picture 38.9 MHz Sound 32.9 MHz(UK)/33.4 MHz(EUR)/34.4 MHz(US) Radio: AM 460 KHz FM 10.7 MHz
Picture Tube	2-inch diagonal, 40 degrees deflection, C205P4 or E2225
Semiconductors	IC 5 Transistor 45 Diode 66
Loudspeaker	45mm round type, 16 ohm
Sound output	150mW (10% distortion) 200mW Max
Power Source	DC 9V (AC adaptor 110-120/220-240V 50/60Hz) Rechargeable battery pack (option) DC adaptor (option)/5 "AA" cells (option)
Power Consumption	DC 2.5W
Dimensions	131mm (W) x 51mm (H) x 157mm (D) approx. (without handle)
Weight	0.8Kg approx.

NOTE: Specifications are subject to change without notice.

# TERMINAL VIEW

<p>2SC668</p>  <p>E C B</p>	<p>2SD612 2SD826</p>  <p>E C B</p>	<p>TO - 92</p> <p>2SA608 2SD545 2SA1048 2SD879 2SB598 2SC2210 2SC2236 2SC2264 2SC2057 2SC2458 2SC2668 2SC2667 2SC536 2SC945 2SC930</p>  <p>E C B</p>	<p>LA3210 TA7137P LA4140</p>  <p>1 2 3 4 5 6 7 8 9</p>	<p>TO - 220AB</p> <p>2SB511 2SC1507 2SC1520 2SC1755 2SC1756 2SD313 2SD325 2SD386 2SB507</p>  <p>B C E</p>
<p>2SC983 2SC1941</p>  <p>E C B</p>	<p>MA56</p>  <p>Cathode Anode</p>	<p>TO - 3 &amp; 66</p> <p>2SB375 2SC1295 2SC1046 2SC1050 2SD575</p>  <p>C B E</p>	<p>2SC2057</p>  <p>B E C</p>	<p>LA4030P</p>  <p>5 6 7 8 Mark 4 3 2 1</p>
<p>HFSD-1C/HF-1C</p>  <p>Cathode Anode</p>	<p>1JZ61 IR5TH61- ERC27-13 W09C W03A</p>  <p>Cathode Anode</p>	<p>IS553 RD5.1EB</p> <p>1S188 1S1834 1S2076 BZ-110 ERB24-02D ERB24-04D ERB24-06D RD7.5E RD11F SIB01-02 SM-1-02FR WZ-075 WZ-063</p>  <p>Cathode Anode</p>	<p>TA7140P</p>  <p>1 2 3 4 5 6 7</p>	<p>LA3301 HA11229 CA3065 TC4081BP LA1363 LA1365 SN76666 LA1201</p>  <p>8 9 14 Mark 7 6 5 4 3 2 1</p>
<p>μPC574J L5630 SVC303 SVC201</p>  <p>Anode Cathode</p>	<p>LA3160</p>  <p>1 2 3 4 5 6 7 8</p>	<p>SLP-131B</p>  <p>Anode Cathode</p>	<p>EDMF-15B EDMF-20B EDMF-25B RF03E14</p>  <p>Cathode Anode</p>	<p>μPC1018C</p>  <p>9 10 16 8 7 6 5 4 3 2 1</p>

E : Emitter C : Collector B : Base S : Shield

## CONTROLS AND TERMINAL IDENTIFICATION

### 1 Light button (LIGHT)

Push this switch to illuminate the LCD clock display.

### 2 Mode Select button (MODE SELECT)

See Owner's Manual Page 6.

### 3 Aerial

Use this aerial to receive TV (VHF, UHF) and FM radio broadcast.

### 4 Time Advance button (TIME ADVANCE)

See Owner's Manual Page 6.

### 5 Time Set switch (TIME SET)

See Owner's Manual Page 6.

### 6 Timer Select switch (TIMER SELECT)

Set the selector to wake up with Buzzer, Radio or TV.

### 7 External Aerial jack (EXT ANT)

Connect the Aerial Adaptor (optional) to this jack to use an external aerial.

### 8 Earphone jack (EAR)

For private listening, plug the earphone (supplied) into the jack.

### 9 TV Select switch (TV SELECT)

Set this switch to desired channel band.

### 10 TV-Radio Select switch (TV-RADIO SELECT)

Select your desired function, TV or Radio (AM or FM).

### 11 Volume control (VOLUME)

Adjust to obtain your required output volume.

### 12 Tuning knob

Use to tune to your desired channel or station and obtain vivid picture and clear sound.

### 13 Main switch

Turns the power ON or OFF or to Timer function.

When recharging the rechargeable battery pack (supplied), plug in the AC Adaptor packed with the set and turn this switch to OFF(charge) or TIMER position.

### 14 TV System switch (TV SYSTEM)

Set this switch to desired television system.

### 15 Contrast control (CONTRAST)

Adjust this control to obtain proper balance between black and white elements of the picture.

### 16 Brightness control (BRIGHT)

Adjust this control to obtain desired brilliance of the picture.

### 17 Vertical Hold control (V-HOLD)

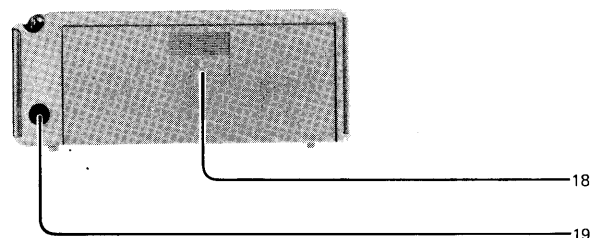
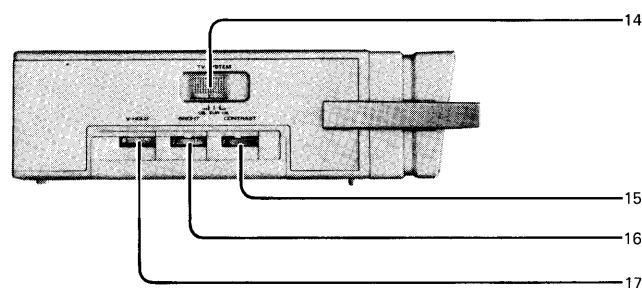
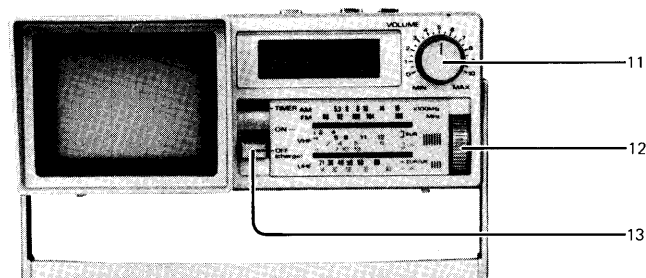
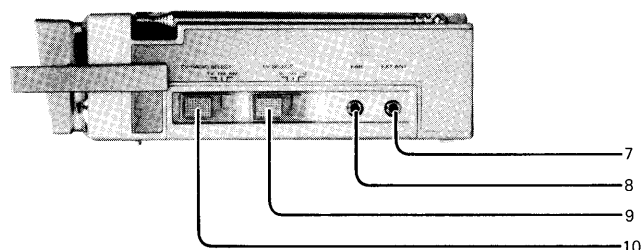
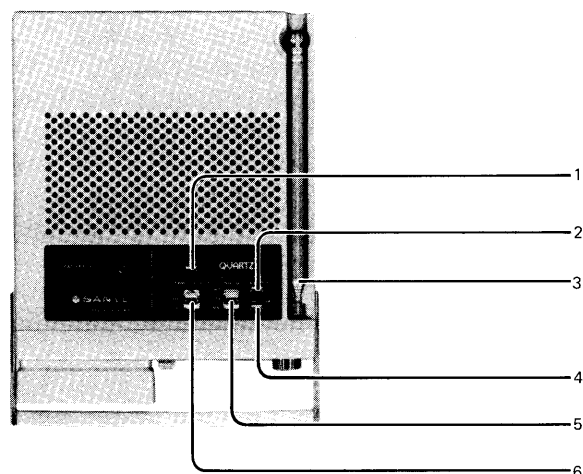
Adjust this control to stop up or down movement of the picture.

### 18 Battery Compartment

Remove the lid by pushing to the direction of arrow and install dry cells or rechargeable battery pack.

### 19 External Power jack (DC IN 9V)

To use the set on AC 110-120/220-240-volt or external DC 12-volt, plug the AC Adaptor or Car Battery Cord Model MDC-53B (optional) into this jack.



## MECHANICAL DISASSEMBLIES

### CABINET TOP REMOVAL

1. Place the TV set upside down on a soft surface.
2. Remove three screws as indicated in Figure 1.
3. Open the battery compartment lid of the rear of the TV set by sliding it in the direction as indicated in Figure 2.
4. Push the two hooks in the direction of the arrow as indicated in Figure 3, and lift the Cabinet Top away from TV set. (NOTE: Be careful of the Rod Antenna and Handle, when you lift the Cabinet Top).

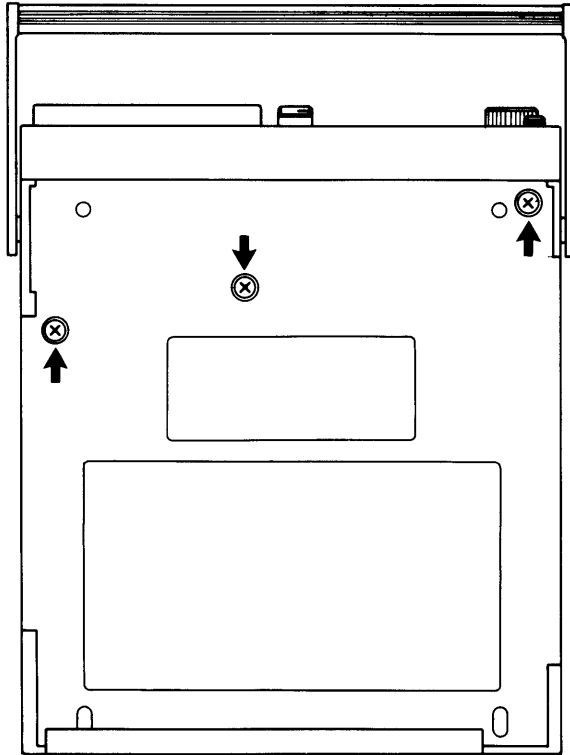
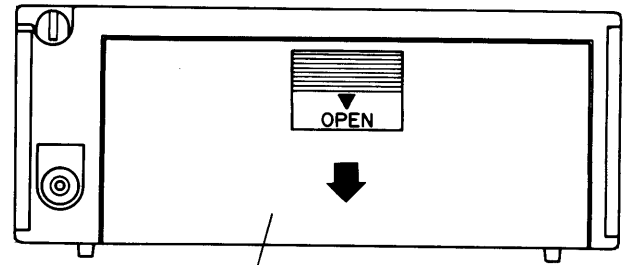


Figure 1



Battery compartment lid

Figure 2

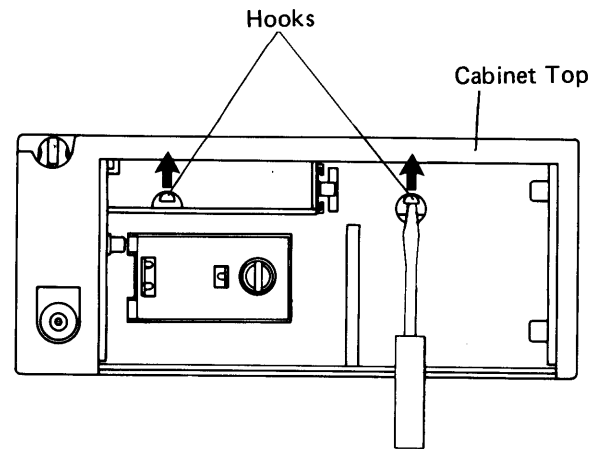


Figure 3

### RADIO P.C.B. REMOVAL

1. Remove Cabinet Top (Refer to CABINET TOP REMOVAL).
2. Take out two knobs (TV-RADIO SELECT, TV SELECT).
3. Remove three screws as indicated in Figure 4.
4. Pull out the Side Panel in the direction (A) as indicated in Figure 4.
5. Pull out the Cabinet Front in the direction (B) as indicated in Figure 4.
6. Take out the 3P socket from the TV P.C.B. as indicated in Figure 5.
7. Lift the Radio P.C.B. and Cabinet Front in the direction of the arrow as indicated in Figure 5.  
(NOTE: Keep the leads P4(Green), P5(Black) and Volume(Gray) as far as possible from the SF101, when assembling after servicing so that the leads does not pick up any oscillation).

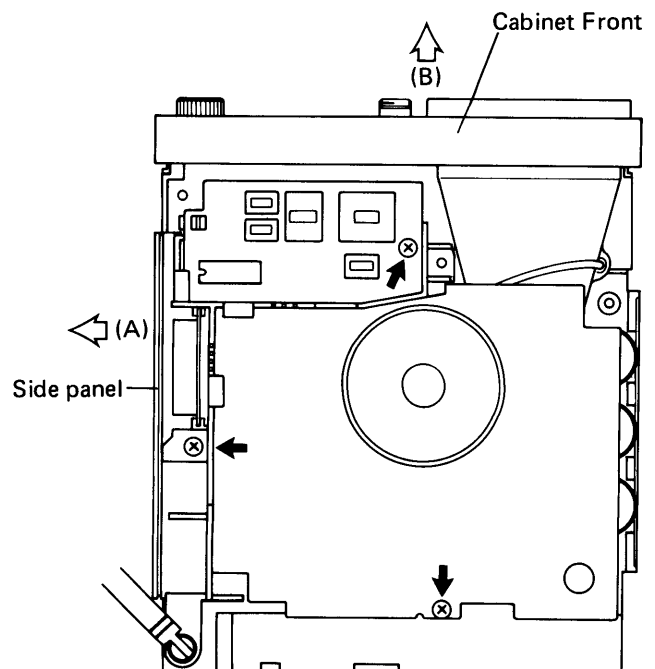


Figure 4

## TV P.C.B. REMOVAL

1. Remove the Cabinet Top and Radio P.C.B. by following the instructions for them.
2. Slightly pull the TV P.C.B. in the direction (A) and lift it in the direction (B) of the arrow as indicated in Figure 5. Then, the TV P.C.B. will be removed.

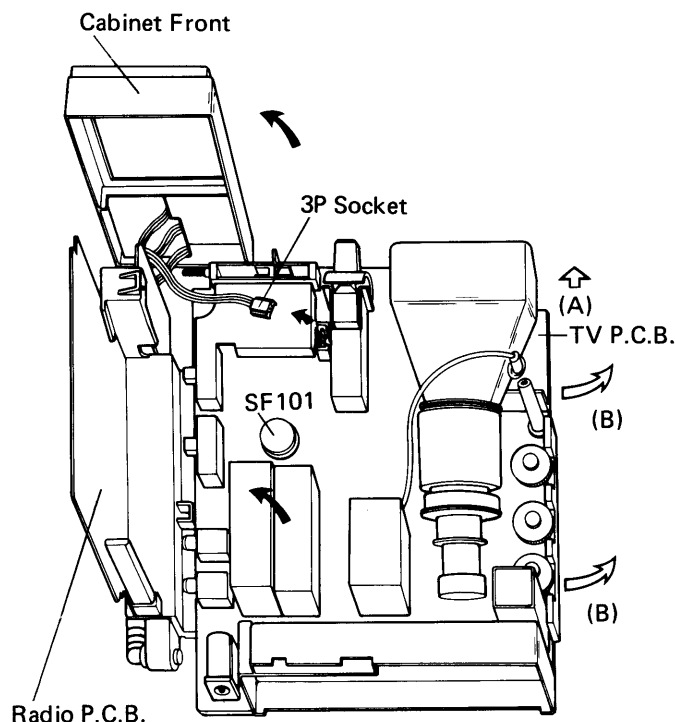


Figure 5

NOTE: When assembling after servicing.

Dress all the leads on Radio P.C.B. to keep away from IC LA4140. Also dress all the leads on TV P.C.B. so that the leads do not cross over to Horizontal Output Trans.

## PICTURE TUBE REMOVAL

1. Remove the Cabinet Top and Radio P.C.B. by following the instructions for them.
2. Remove the anode cap and the picture tube socket. Then, slightly loosen the screw securing the Deflection Yoke.
3. Pull the picture tube toward you.  
(The Safety Shield can be removed under this condition. However, insert the Safety Shield into the CRT when the CRT is mounted. Be sure there is no accumulation of dust between the picture tube face and the Safety Shield when reinstalling.)
4. After picture tube removal.  
Place section (A) of the Cabinet Top on Anode Cap of the picture tube, when Cabinet Top assembling as illustrated in Figure 6.

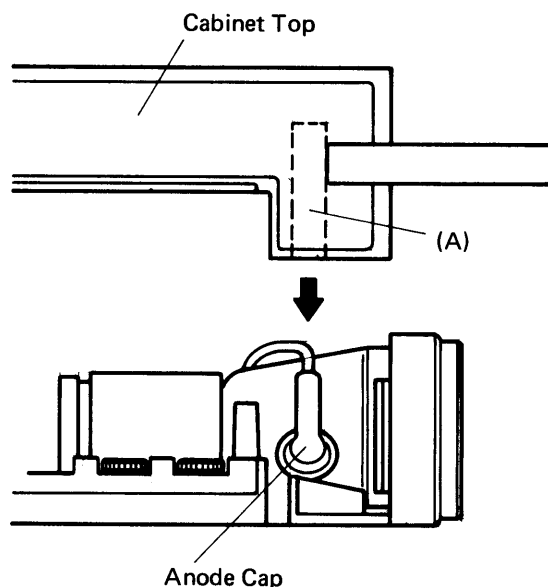


Figure 6

## SPEAKER REMOVAL

When you have replaced the Speaker, Do not forget the lead (Black) roll on magnet of the Speaker and apply plenty of cemedine adhesive around the lead as illustrated in Figure 7.

(REASON: To prevent picture distortion when sound maximum).

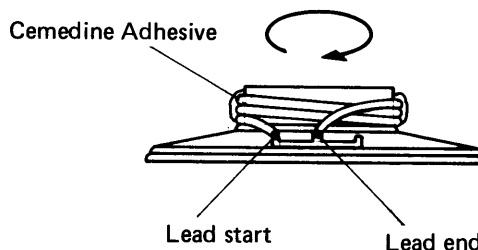


Figure 7

## IMPORTANT NOTICE FOR SERVICE PERSONNEL BEFORE SERVICING

### PLEASE READ BEFORE ATTEMPTING SERVICE

- 1 The AC power line voltage must be kept within  $\pm 10\%$  of the rated voltage.
- 2 DO NOT DISCHARGE, ARC, OR MEASURE HIGH VOLTAGE WHEN HIGH VOLTAGE LEAD IS CONNECTED TO CRT. DISCHARGE 2ND ANODE OF CRT ONLY AFTER HIGH VOLTAGE LEAD HAS BEEN DISCONNECTED. DO NOT DISCHARGE HIGH VOLTAGE LEAD AT ANY TIME, DAMAGE TO TRANSISTORS MAY RESULT.
- 3 While the receiver is in operation, do not attempt to connect or disconnect any wires.
- 4 Disconnect all power before attempting any repairs.
- 5 When the power is on, do not attempt to short any portion of the circuit. This shorting may cause damage to the transistors in the receiver.
- 6 When adjusting Horizontal Oscillator Frequency, do not vary this frequency more than  $\pm 800$  Hz from 15,750 Hz center frequency: 800 Hz equals 13 bars.

## TELEVISION ADJUSTMENT

### PICTURE FOCUS (See Fig. 8)

Adjust focus - VR (FP601) to obtain the best focus. While the adjustment, do not disconnect the picture tube coating earth.

### DEFLECTION YOKE AND CENTERING RINGS

- 1 Turn the receiver on and disconnect the antenna.
- 2 Loosen the Deflection Yoke Clamp, and carefully move the yoke on the neck of the picture tube as far forward as possible. Rotate the yoke until the top and bottom edges of the raster are straight. Tighten the clamp.
- 3 Center the raster and eliminate shaded corners by rotating the centering rings until the best effect is obtained.

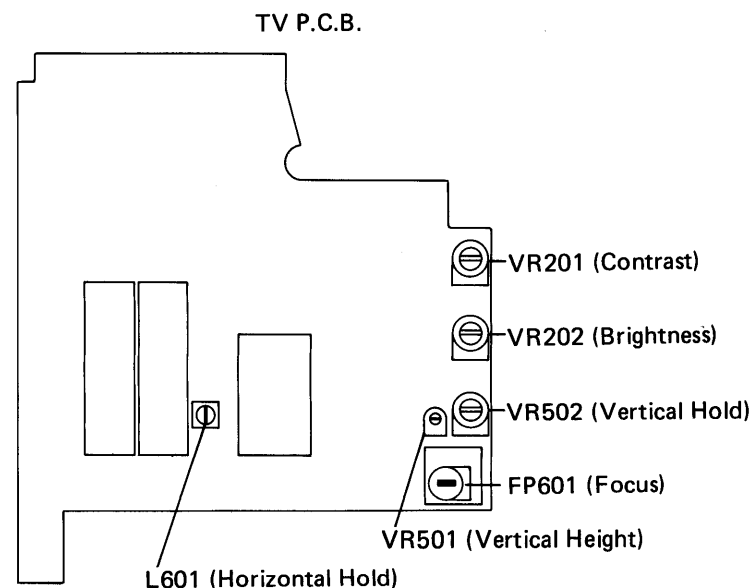


Figure 8

### VERTICAL HEIGHT (See Fig. 8)

- 1 Adjust the Height control (VR501) to obtain proper picture height.
- 2 Rotate V - Hold control (VR502) completely clockwise or counterclockwise to confirm the picture rolls up or down at both extreme positions.

### HORIZONTAL HOLD CONTROL (See Fig. 8)

Adjust the H - Hold control (L601) to corrects any slanting of the picture.

### SOUND IF ALIGNMENT PROCEDURE (See Fig. 9)

- 1 Set the TV System switch to UK position (SW01).
- 2 Set the Signal Generator to 6.0MHz, FM 1KHz $\pm$ 15KHz dev. and Sig. Gen. output 110db.
- 3 Connect the Signal Generator through 4700pF to P4, VTVM to Q (R305) respectively.
- 4 Set the TV Tuning Knob to unused channel.
- 5 Adjust T301 for maximum reading on VTVM.
- 6 Set the Signal Generator to 6.0MHz, AM 1KHz $\pm$ 30%dev, and Sig. Gen. output 40db $\pm$ 10db for maximum reading on VTVM, then adjust T301 for minimum reading on VTVM.
- 7 Set the TV System switch to EUR position (SW01).
- 8 Set the Signal Generator to 5.5MHz, AM 1KHz $\pm$ 30%dev, and Sig. Gen. output 40db $\pm$ 10db for maximum reading on VTVM, then adjust CT302 for minimum reading on VTVM.
- 9 Set the TV System switch to US position (SW01).
- 10 Set the Signal Generator to 4.5MHz, AM 1KHz $\pm$ 30%dev, and Sig. Gen. output 40db $\pm$ 10db for maximum reading on VTVM, then adjust CT301 for minimum reading on VTVM.

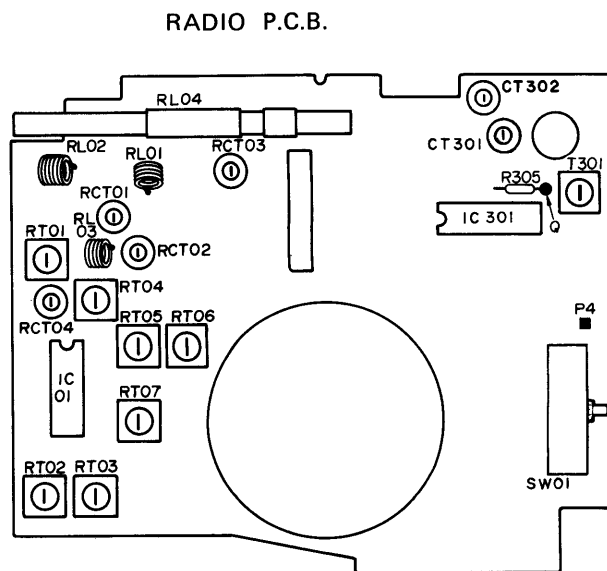


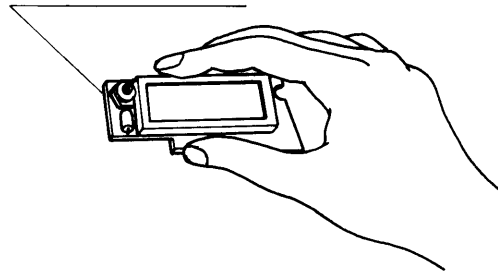
Figure 9

## HANDLING AND REPAIRING OF LCD QUARTZ CLOCK P.C.B.

### HANDLING OF LCD QUARTZ CLOCK P.C.B. (MODULE & CONTROL UNIT)

1. LCD Quartz Clock uses C-MOS LSI and C-MOS IC. These LSI and IC are very sensitive to static electricity and can be easily damaged by the static electricity. Therefore, give a proper protection to the Clock P.C.B. when handling it.
2. As LCD is very weak against ultraviolet rays, do not expose the watch to direct sunlight or extremely hot temperatures.
3. The polarized plate is attached on the surface of LCD to make letter contrasts. As the plate can easily be scratched, pay due caution when handling it.
4. Strong shock on the surface of LCD will cause defective electrical contacts and time display.
5. After attaching LCD to the unit, wipe the surface of LCD clean with a soft cloth to prevent it from electrification.
6. Do not touch the P.C.B. pattern directly. Hold the both ends of the P.C.B.

MODUL UNIT P.C.B.

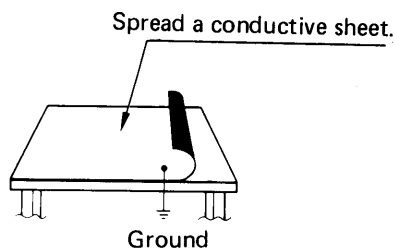


### LCD QUARTZ CLOCK P.C.B. STORAGE

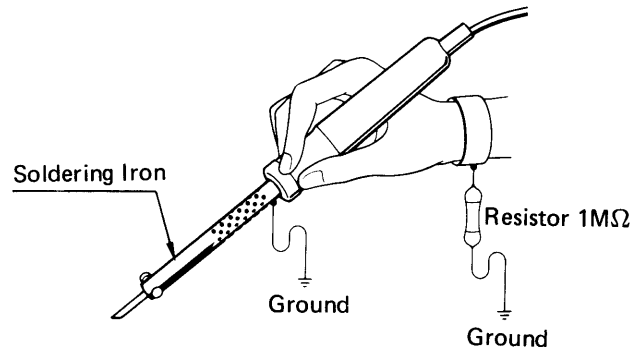
1. Store the watch in an ambient temperature of 0°C – 50°C and low humidity. Also keep it in a dark place.
2. Do not unwrap the package of the parts before use.
3. Completed LCD Quartz Clock P.C.B. and LCD Quartz Clock Control Unit are prepared as repair parts.

### NOTES ON CLOCK P.C.B. REPAIR

1. Spread the conductive sheet on the worktable and ground it. Perform the repair work on the table.



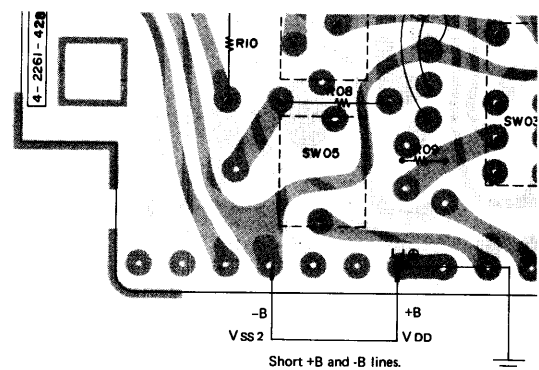
2. Use a soldering iron for IC (Insulation resistance: 300M-ohm) or ground the ordinary soldering iron to prevent alternate current leakage.
3. When performing a repair work, wear the grounded



conductive bracelet with 1M-ohm resistor.

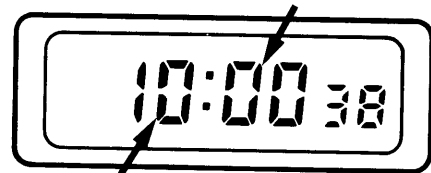
4. Ground the meter body to avoid electrification.
5. Do not use the resistance range at the measurement by the tester.
6. Take out the five dry batteries and a silver oxide battery. Then, remove the LCD Quartz Clock P.C.B. following the disassembly method.
7. Discharge the electric potential by shorting the +B line and –B line in the Clock Control Unit. Then, ground the +B line.

CONTROL UNIT P.C.B.

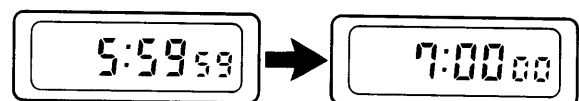


### REPAIR OF LCD QUARTZ WATCH

- Before repair work, check to see that the silver oxide battery is correctly set in the battery holder and that the leads connected to the Watch P.C.B. are not broken.
- When any trouble on the watch display is caused, replace the completed LCD Quartz Clock P.C.B. or the LCD Quartz Control Unit with a new one.
- Replace them when the following troubles appear.
  1. LCD display does not appear when the battery is replaced with a new one.
  2. A part of the digital display is missing as illustrated.

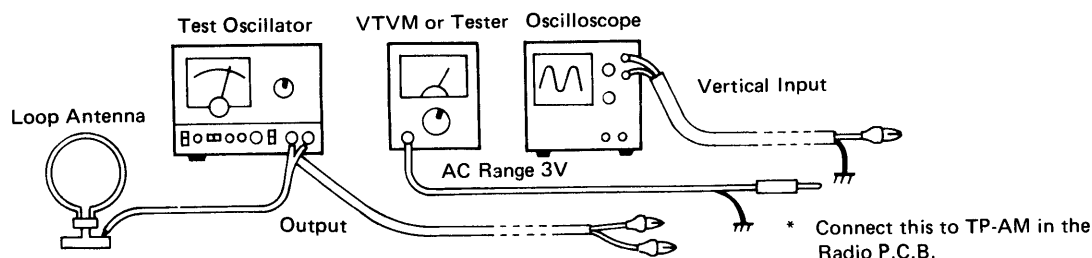


3. Time display is skipped over as illustrated.



# AM RADIO ALIGNMENT PROCEDURE

## CONNECTION OF THE MEASURING INSTRUMENTS



\* Bring the output cord of the test oscillator close to the Bar Antenna.

## PRELIMINARIES

- 1 Oscilloscope is set to prevent the waveform from saturating and to obtain peak value.
- 2 Set the VTVM to the 3V, AC range.
- 3 Modulate the test oscillator at 1KHz and set the degree of modulation to approximately 30% if the modulation degree is variable.

## AM IF ADJUSTMENT (460KHz Adjustment)

- 1 Set the test oscillator to 460KHz.
  - 2 Adjust the cores of IFT, RT05, RT06 and RT07 for maximum reading on VTVM. (Repeat the adjustment two or three times.)
- \* Keep the output of the test oscillator as low as possible. Check to see that the waveform is not saturated by using the oscilloscope.

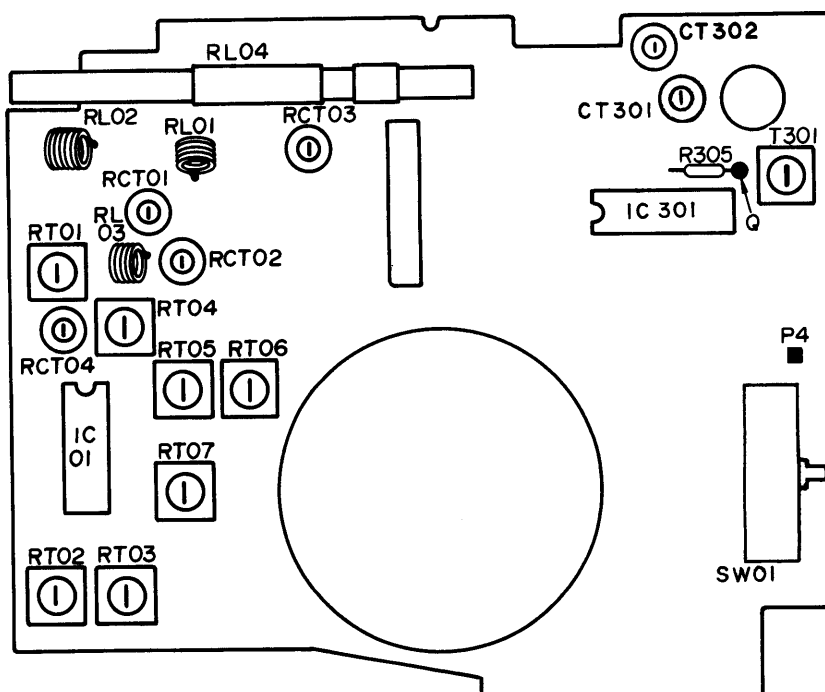
## AM TRACKING ADJUSTMENT

- 1 Remove the paraffin fastening the coil of the bar antenna(RL04), so that the coil can be moved.
  - 2 Set the test oscillator and the Radio Dial to 600KHz.
  - 3 Move the coil of the bar antenna for maximum oscilloscope waveform and VTVM indication.
- \* After adjustment, fasten the coil with paraffin.
- 4 Set the test oscillator and the Radio Dial to 1400KHz.
  - 5 Adjust the trimmer capacitor (RCT03) of the variable capacitor for maximum oscilloscope waveform and VTVM indication.
- \* Repeat the AM frequency range and AM tracking adjustments two or three times.

## AM FREQUENCY RANGE ADJUSTMENT (Adjustment to cover 530KHz - 1605KHz)

- 1 Set the test oscillator to 505KHz.
- 2 Turn the Radio Tuning Knob to the lower frequency(Tuning Capacitor plates fully meshed).
- 3 Adjust the core of RT04 for maximum oscilloscope waveform and VTVM indication.
- 4 Set the test oscillator to 1650KHz.
- 5 Turn the Radio Tuning Knob to the highest frequency (Tuning Capacitor plates fully open).
- 6 Adjust the trimmer capacitor(RCT04) of the variable capacitor for maximum oscilloscope waveform and VTVM indication.

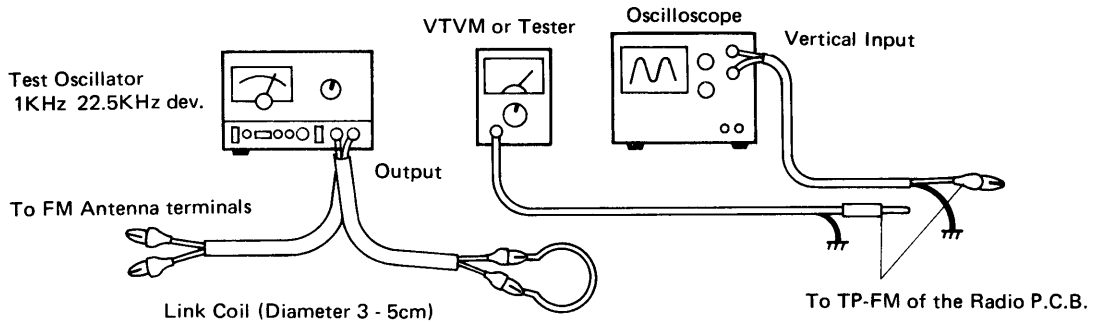
## RADIO CHASSIS TOP VIEW





## FM RADIO ALIGNMENT PROCEDURE

### CONNECTION OF THE MEASURING INSTRUMENTS



#### PRELIMINARIES

- 1 Set the VTVM to the 3V, AC range.
- 2 Make a link coil of diameter 3 - 5cm(2") as illustrated for the test oscillator output and set it on Q02 or RL02 when FM IF adjustments are performed. Connect the oscillator output to the FM antenna terminals for some other adjustments.

#### FM IF ADJUSTMENT (10.7MHz Adjustment)

- 1 Set the link coil on RL02.
- 2 Set the test oscillator to 10.7MHz and adjust IFT RT02 for maximum on the VTVM.
- 3 Minimize the test oscillator output as much as possible and adjust IFT RT01, RT02 and RL02 for maximum on the VTVM.
  - \* Repeat the adjustment two or three times.
- 4 Adjust IFT RT03 for maximum on the VTVM.
- 5 Check to see that the indications of VTVM is identical. If not, repeat steps 2 - 4.

#### FM FREQUENCY RANGE ADJUSTMENT

(Adjustment to cover 87.5MHz - 108MHz)

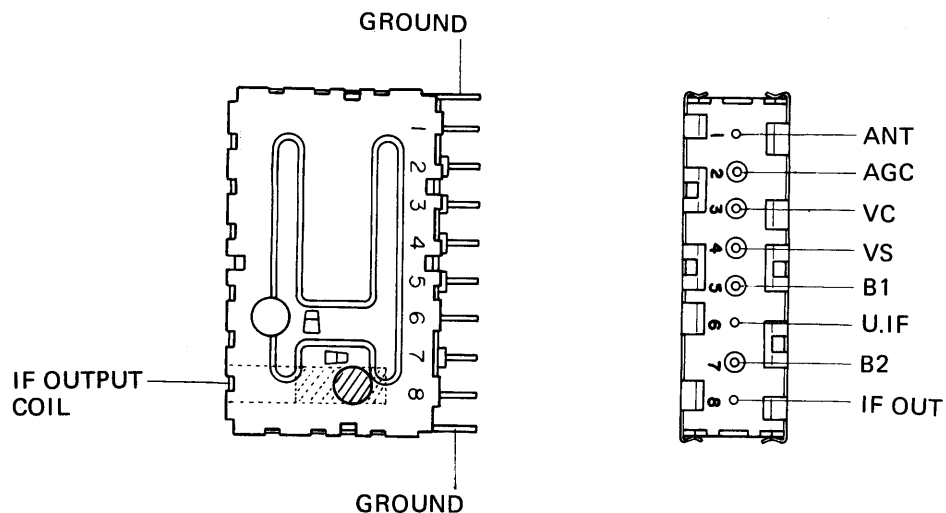
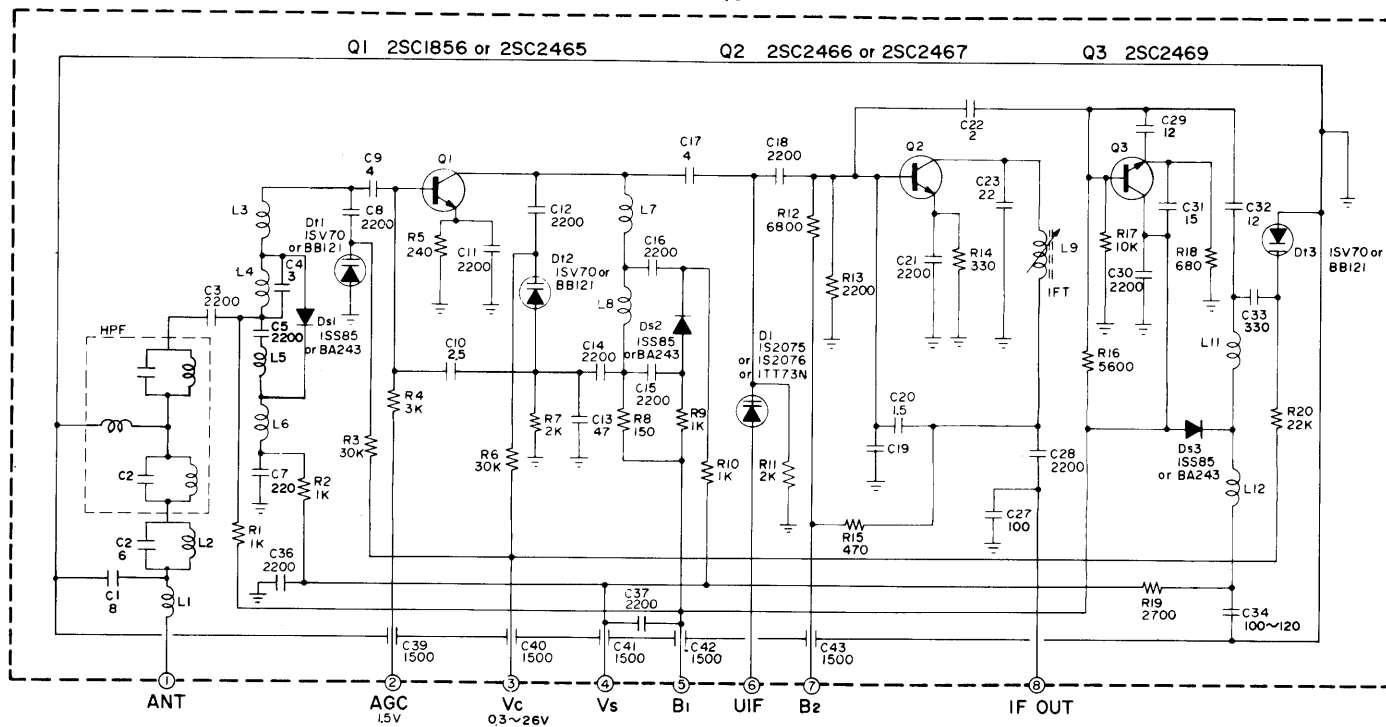
- 1 Set the test oscillator to 87.25MHz and connect it to the FM terminals.
- 2 Turn the Radio Tuning Knob to the lower frequency (Tuning Capacitor plates fully meshed).
- 3 Adjust RL03 for maximum indication on the oscilloscope and VTVM.
  - \* After adjustment, secure RL03 with paraffin.
- 4 Set the test oscillator to 108.40MHz and turn the Radio Tuning Knob to the higher frequency (Tuning Capacitor plates fully open).
- 5 Adjust the trimmer capacitor RCT02 on the variable capacitor for maximum indication on the oscilloscope and VTVM.

#### FM TRACKING ADJUSTMENT

- 1 Set the test oscillator to 90.0MHz and connect the output to the FM antenna terminals.
- 2 Set the Radio Dial to 90.0MHz and adjust RL01 and RL02 for maximum.
  - \* After adjustment, secure RL01 and RL02 with paraffin.
- 3 Set the test oscillator and the Radio Dial to 105.0MHz.
- 4 Adjust the trimmer capacitor RCT01 of the variable capacitor for maximum oscilloscope waveform and VTVM indication.
  - \* Repeat the FM Frequency range and FM tracking adjustments two or three times.

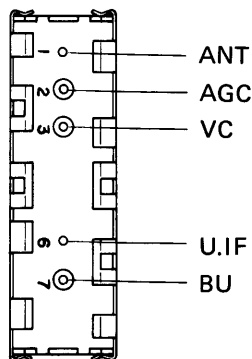
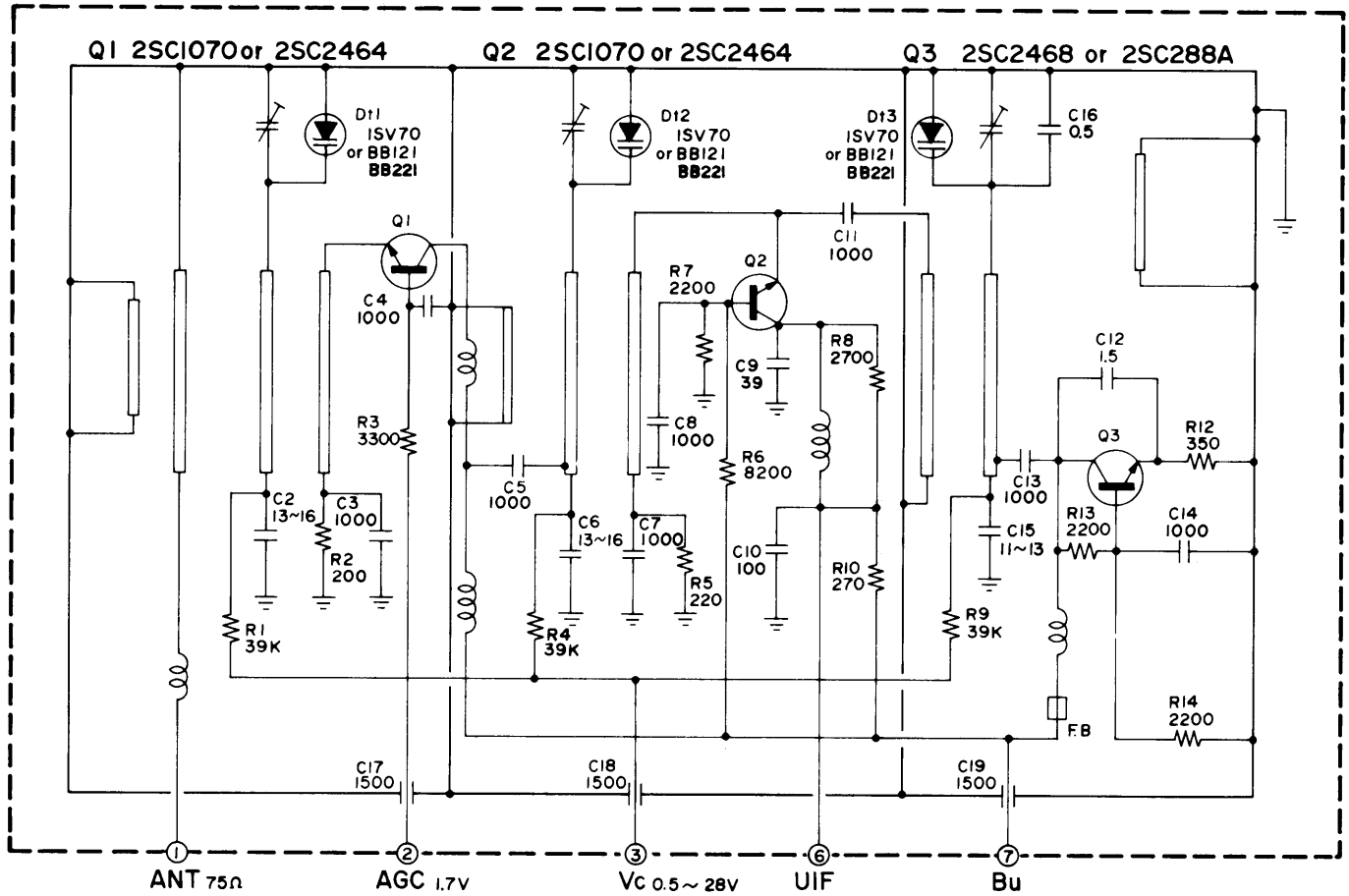
# SCHEMATIC DIAGRAM (TUNER)

VHF TUNER  
4-1151-07740



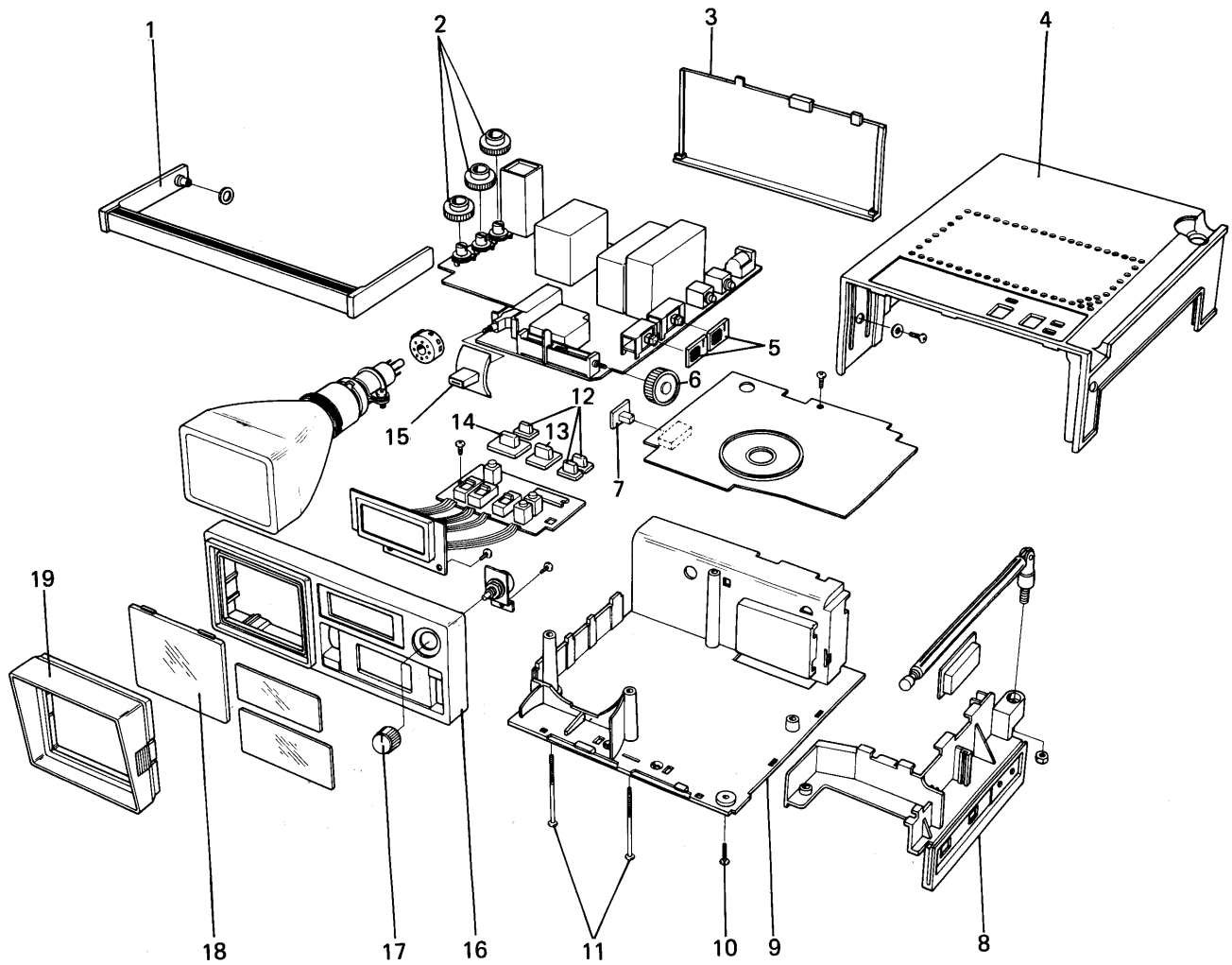
PICTORIAL OF VHF TUNER

# UHF TUNER 4-1151-46540



PICTORIAL OF UHF TUNER

## REPLACEMENT PARTS LIST



Key No.	Parts No.	Description	Q'ty
1	111 0 1711 07170	HANDLE ASSY-TMF	1
2	111 2 1641 24770	TV CONTROL KNOB-TMF	3
3	111 2 1161 18872	BATTERY COVER-TMF-A1	1
4	111 0 1161 16973	CAB TOP ASSY-TMF-A2	1
5	111 2 1641 25070	SELECT KNOB-TMF	2
6	111 2 1631 18270	TUNING KNOB-TMF	1
7	111 2 1641 24970	E/A SELECT KNOB-TMF	1
8	111 2 1241 12072	SIDE PANEL-TMF-A1	1
9	111 0 1161 17073	CAB BOT ASSY-TMF-A2	1
10	111 2 4211 15270	BTP, 3.0x12, C2	1
11	111 2 4211 15070	SUS BTP 3.0x40	2
12	111 2 1641 24470	TIME SET BUTTON-TMF	3
13	111 2 1641 24570	TIMER SW KNOB-TMF	1
14	111 2 1641 25170	TIMER SW KNOB-TMF-B	1
15	111 2 1641 24870	POWER SW KNOB-TMF	1
16	111 0 1121 10573	CAB FR ASSY-TMF-A2	1
17	111 2 1641 24670	VOLUME KNOB-TMF	1
18	111 2 1141 15270	SAFETY SHIELD-TMF	1
19	111 2 6151 10370	HOOD-TMF	1

# PARTS LIST

## PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A UNIT. COMPONENTS INDICATED BY A MARK  $\Delta$  IN THIS PARTS LIST AND THE SCHEMATIC DIAGRAM SHOW COMPONENTS WHOSE VALUE HAVE SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE FOLLOWING PARTS LIST BE USED FOR COMPONENT REPLACEMENT POINTED OUT BY THE MARK.

Schematic Location	Parts No.	Description	Q'ty	Schematic Location	Parts No.	Description	Q'ty
<b>CHASSIS PARTS</b>				L601	4 2731 06070	HORIZ OSC COIL	1
111 2 5291	12670	CLO PCB HOLDER-TMF	1	L602	4 2761 49870	DEFLECTION YOKE	1
111 2 6111	27570	TV SHIELD CASE-TMF	1	SF101	4 2531 12423	SAW FILTER	1
111 2 6111	27670	TV SHLD CASE TOP-TMF	1	T601	4 2751 48800	FLYBACK TRANS	1
111 2 6111	27770	TV SHLD CASE BOT-TMF	1	X201	4 2531 10570	CERAMIC TRAP 4.5M	1
111 2 6211	24370	RADIATOR PLATE-TMF	1	X202	4 2531 10670	CERAMIC TRAP 5.5M	1
111 2 6231	15670	CRT EARTH TIP-TMF	1				
111 2 7311	34370	TV PCB INS SHEET-TMF	1	<b>SMALL PARTS</b>			
<b>PACKING MATERIALS</b>					4 2261 42671	PC BOARD 9JC-P	1
111 6 1131	21371	OUT CORR CASE-TMF-AB	1		4 2261 43771	PC BOARD 9JC-U	1
111 6 1411	12172	IND CASE-TMF-AC	1	SW03, 04	4 2311 10370	SLIDE SWITCH	2
111 6 2511	19670	IND POLY COVER-MBA	1	SW02	4 2311 10670	LEVER SWITCH	1
111 6 3111	54970	TOP INNER CUSH-TMF-B	1		4 2351 05770	CRT SOCKET	1
111 6 3111	55070	BOT INNER CUSH-TMF-B	1		4 2351 74570	1P DC JACK-E	1
111 6 3911	10970	TOP PAD-TMF. US	2		4 2361 14570	3P M MICRO PLUG	2
<b>ACCESSORIES AND LABELS</b>					4 2361 14670	1P MICRO PLUG	6
	4 6611 00270	S-OXIDE BAT G12	1		4 2441 06570	ROD ANTENNA	1
111 0 1771	10170	SHLD BELT AY-TMF	1	P2	111 0 9081 01011	1P MICRO SOCKET ASSY	1
<del>111 0 6151 10470</del>		HOOD ASSY-TMF-D	1	P7	111 0 9081 01012	1P MICRO SOCKET ASSY	1
111 0 9021	04270	CONVERSION PLUG ASSY	1	P8	111 0 9081 01013	1P MICRO SOCKET ASSY	1
111 0 9131	15400	AC ADAPTOR ASSY	1	P10, 11	111 0 9081 01019	1P MICRO SOCKET ASSY	2
111 2 1811	10172	CARRING CASE-TMF-C	1	P12, 13	111 0 9081 01020	1P MICRO SOCKET ASSY	2
111 6 2701	14309	PM ASSY-TMF-K	1		111 0 9081 03037	3P NI-CD PLUG ASSY	1
111 6 2711	05870	ENVELOPE-SR-C	(1)	<b>VARIABLE RESISTORS</b>			
111 6 4111	97872	INST MANUAL-TMF-C	(1)	VR001	4 2221 33770	TUNING VR B-100K	1
111 6 4211	26063	SCHEMATIC DIAG-9J	(1)	VR201	4 2221 33870	9CVFR9B-5K	1
111 6 4151	20370	POWER SETTING NOTICE	(1)	VR202	4 2221 33970	9CVFR9B-200K	1
111 6 4151	20570	BATTERY NOTICE-TMF	(1)	VR501	4 2221 34170	6CVFRB-2M	1
111 0 9121	06371	EARPHONE	1	VR502	4 2221 34070	9CVFR9B-2M	1
111 6 2711	05870	ENVELOPE-SR-C	1	<b>CAPACITORS</b>			
111 6 4151	20570	BATTERY NOTICE-TMF	1	C001	C1EYDK102C--	CERAMIC 1000P C 25V	1
111 6 4551	18770	SERIAL NO LABEL-TJP	2	C002	C1EYDK102C--	CERAMIC 1000P C 25V	1
<b>SCREWS-CABINET</b>				C003	C0JRE-476A--	ELECT 47M 6.3V	1
101 3 1102	60401	SNB , 2.6X 4, Z1	2	C004	C1EYDK102C--	CERAMIC 1000P C 25V	1
102 3 2203	00601	SBT , 3.0X 6, Z1	2	C101	C1HYDK102W--	CERAMIC 1000P W 50V	1
102 3 2203	00802	SBT , 3.0X 8, Z1	3	C102	C1HCDJ680RH-	CERAMIC 68P RH 50V	1
102 3 2203	01001	SBT , 3.0X 10, Z1	1	C103	C1HYDK102W--	CERAMIC 1000P W 50V	1
104 3 1103	00005	ZRN 1, 3.0.	1	C104	C1HYDK102W--	CERAMIC 1000P W 50V	1
111 2 4211	15070	SUS BTP 2.3.0X40	2	C105	C1HYDK102W--	CERAMIC 1000P W 50V	1
111 2 4211	15270	BTP 2.3.0X12.C2	1	C106	C1HCDJ390RH-	CERAMIC 39P RH 50V	1
<b>SCREWS-CHASSIS</b>				C107	C1HYDK102W--	CERAMIC 1000P W 50V	1
101 3 1103	00802	SNB , 3.0X 8, Z1	1	C108	C1HCDJ820RH-	CERAMIC 82P RH 50V	1
102 3 2203	00802	SBT , 3.0X 8, Z1	2	C109	C1HYDK102W--	CERAMIC 1000P W 50V	1
104 3 1103	00006	SRN 1, 3.0.	1	C110	C1HCDJ820RH-	CERAMIC 82P RH 50V	1
111 3 1103	00803	SBW , 3.0X 8.0X05Z1	1	C111	C1HCDD100RH-	CERAMIC 10P RH 50V	1
<b>ELECTRICAL PARTS</b>				C112	C1HCDD100RH-	CERAMIC 10P RH 50V	1
	4 1151 07740	VHF TUNER	1	C113	C1HCDD100RH-	CERAMIC 10P RH 50V	1
	4 1151 46540	UHF TUNER	1	C114	C1EYDK473C--	CERAMIC 0.047M C 25V	1
	4 1511 09370	SPEAKER	1	C115	C1EYDK473C--	CERAMIC 0.047M C 25V	1
	4 2531 12570	U-V FILTER	1	C116	C1EYDK473C--	CERAMIC 0.047M C 25V	1
	4 9541 00270	LCD CLOCK DQ437	1	C117	C0JRE-227A--	ELECT 220M 6.3V	1
111 0 9061	42870	CLOCK CONTROL UNIT	1	C118	C1CRE-106A--	ELECT 10M 16V	1
111 0 9061	43371	OSC BLOCK UNIT	1	C119	C1HRE-105A--	ELECT 1M 50V	1
FP601	4 1911 06070	FOCUS PACK	1	C120	C0JRE-476A--	ELECT 47M 6.3V	1
L001	4 2531 12870	FILTER COIL 0.33UH	1	C121	C1EYDK473C--	CERAMIC 0.047M C 25V	1
L101	4 2531 15170	FILTER COIL 0.56UH	1	C122	C1EYDK473C--	CERAMIC 0.047M C 25V	1
L102	4 2531 15470	FILTER COIL 1.2UH	1	C123	C1HRE-105A--	ELECT 1M 50V	1
L103	4 2531 13470	FILTER COIL 39MHZ	1	C124	C1HYDP103Z--	CERAMIC 10000P Z 50V	1
L104	4 2531 13570	FILTER COIL 78MHZ	1	C125	C1HYDP103Z--	CERAMIC 10000P Z 50V	1
L105	4 2721 02209	PEAKING COIL 220	1	C126	C1EYDK473C--	CERAMIC 0.047M C 25V	1
L106	4 2531 15870	FILTER COIL 0.56UH	1	C127	C1EYDK473C--	CERAMIC 0.047M C 25V	1
L201	4 2531 15770	FILTER COIL 2.2UH	1	C202	C0JTDMA476A--	TANTAL 47M 6.3V	1
				C203	C1HYDK471W--	CERAMIC 470P W 50V	1
				C204	C0JRE-107A--	ELECT 100M 6.3V	1
				C205	C1HDRK104C--	M-CERAMIC 0.1M 50V	1

- NOTICE: 1. Parts orders must contain Model Number, Parts Number and Description.  
2. Ordering quantity of resistors must be multiple of 10pcs.  
3. Component parts indicated by parentheses in the column Q'ty are not available.

# PARTS LIST

Schematic Location	Parts No.	Description	Q'ty	Schematic Location	Parts No.	Description	Q'ty
C401	C1HRE-105A--	ELECT 1M 50V	1	R132	R2BSUJ102A	CARBON 1K 1/8WJ	1
C402	C1EYDK223C--	CERAMIC 0.022M C 25V	1	R201	R2BSUJ220A	CARBON 22 1/8WJ	1
C403	C1EYDK223C--	CERAMIC 0.022M C 25V	1	R202	R2BSUJ821A	CARBON 820 1/8WJ	1
C501	C1EYDK473C--	CERAMIC 0.047M C 25V	1	R203	R2BSUJ820A	CARBON 82 1/8WJ	1
C502	C1VTDK224A--	TANTAL 0.22M 35V	1	R204	R2BSPJ682A	CARBON 6.8K 1/8WJ	1
C503	C1HDRK104C--	M-CERAMIC 0.1M 50V	1	R205	R2BSPJ392A	CARBON 3.9K 1/8WJ	1
C504	C1HRE-105A--	ELECT 1M 50V	1	R206	R2BSPJ122A	CARBON 1.2K 1/8WJ	1
C505	C1EYDK223C--	CERAMIC 0.022M C 25V	1	R207	R2BSUJ102A	CARBON 1K 1/8WJ	1
C506	C1HYDK102W--	CERAMIC 1000P W 50V	1	R208	R2BSPJ123A	CARBON 12K 1/8WJ	1
C507	C1HYDK561W--	CERAMIC 560P W 50V	1	R209	R2BSUJ561A	CARBON 560 1/8WJ	1
C508	C1HDRK104C--	M-CERAMIC 0.1M 50V	1	R210	R2BSPJ222A	CARBON 2.2K 1/8WJ	1
C509	COJRE-477A--	ELECT 470M 6.3V	1	R211	R2BSUJ224A	CARBON 220K 1/8WJ	1
C510	COJRE-476A--	ELECT 47M 6.3V	1	R212	R2BSPJ225A	CARBON 2.2M 1/4WJ	1
C512	C1HDRK823C--	M-CERAMIC 0.082M 50V	1	R213	R2BSUJ222A	CARBON 2.2K 1/8WJ	1
C513	C1HDRK154C--	M-CERAMIC 0.15M 50V	1	R401	R2BSUJ101A	CARBON 100 1/8WJ	1
C514	C1HFRJ154A--	MYLAR 0.15M 50V	1	R402	R2BSUJ561A	CARBON 560 1/8WJ	1
C515	COJRE-108A--	ELECT 1000M 6.3V	1	R403	R2BSUJ224A	CARBON 220K 1/8WJ	1
C516	C1HDRK823C--	M-CERAMIC 0.082M 50V	1	R404	R2BSUJ473A	CARBON 47K 1/8WJ	1
C601	C1EYDK332C--	CERAMIC 3300P C 25V	1	R405	R2BSUJ681A	CARBON 680 1/8WJ	1
C602	C1HFRK472A--	MYLAR 0.0047M 50V	1	R406	R2BSUJ472A	CARBON 4.7K 1/8WJ	1
C603	C1HFRK472A--	MYLAR 0.0047M 50V	1	R407	R2BSUJ123A	CARBON 12K 1/8WJ	1
C604	C1HDRK104C--	M-CERAMIC 0.1M 50V	1	R501	R2BSPJ5R6A	CARBON 5.6 1/4WJ	1
C605	C1ERE-475A--	ELECT 4.7M 25V	1	R502	R2BSUJ472A	CARBON 4.7K 1/8WJ	1
C606	C1HFRJ183A--	MYLAR 0.018M 50V	1	R503	R2BSPJ124A	CARBON 120K 1/8WJ	1
C607	C1HDRK104C--	M-CERAMIC 0.1M 50V	1	R504	R2BSPJ334A	CARBON 330K 1/8WJ	1
C608	COJRE-476A--	ELECT 47M 6.3V	1	R505	R2BSUJ101A	CARBON 100 1/8WJ	1
C609	C1CRE-106A--	ELECT 10M 16V	1	R506	R2BSPJ394A	CARBON 390K 1/8WJ	1
C610	C2AQRJ273A--	POLYPR 0.027M 100V	1	R507	R2BSPJ105A	CARBON 1M 1/8WJ	1
C611	C2HYDK102W--	CERAMIC 1000P W 500V	1	R508	R2BSPJ823A	CARBON 82K 1/8WJ	1
C612	COJRE-477A--	ELECT 470M 6.3V	1	R509	R2BSPJ394A	CARBON 390K 1/8WJ	1
C613	C1HRE-475A--	ELECT 4.7M 50V	1	R510	R2BSPJ124A	CARBON 120K 1/8WJ	1
C614	C1ERE-475A--	ELECT 4.7M 25V	1	R511	R2BSPJ823A	CARBON 82K 1/8WJ	1
C615	C1HRE-105A--	ELECT 1M 50V	1	R512	R2BSPJ333A	CARBON 33K 1/8WJ	1
C616	C1HFRK473A--	MYLAR 0.047M 50V	1	R513	R2BSPJ220A	CARBON 22 1/8WJ	1
C617	C1HFRK223A--	MYLAR 0.022M 50V	1	R514	R2BSUJ562A	CARBON 5.6K 1/8WJ	1
C620	C1HYDK561W--	CERAMIC 560P W 50V	1	R515	R2BSUJ221A	CARBON 220 1/8WJ	1
C622	C1EYDK102C--	CERAMIC 1000P C 25V	1	R516	R2BSUJ224A	CARBON 220K 1/8WJ	1
C701	C1CRE-106A--	ELECT 10M 16V	1	R517	R2BSUJ184A	CARBON 180K 1/8WJ	1
C702	C1EYDK473C--	CERAMIC 0.047M C 25V	1	R518	R2BSUJ473A	CARBON 47K 1/8WJ	1
C703	C1EYDK473C--	CERAMIC 0.047M C 25V	1	R519	R2BSUJ2R2A	CARBON 2.2 1/8WJ	1
C704	C1CRE-476A--	ELECT 47M 16V	1	R520	R2BSUJ8R2A	CARBON 8.2 1/8WJ	1
				R521	R2BSUJ473A	CARBON 47K 1/8WJ	1
				R522	R2BSUJ220A	CARBON 22 1/8WJ	1
				R523	R2BSPJ824A	CARBON 820K 1/8WJ	1
				R601	R2BSUJ561A	CARBON 560 1/8WJ	1
				R602	R2BSUJ103A	CARBON 10K 1/8WJ	1
				R603	R2BSUJ392A	CARBON 3.9K 1/8WJ	1
				R604	R2BSUJ102A	CARBON 1K 1/8WJ	1
				R605	R2BSUJ222A	CARBON 2.2K 1/8WJ	1
				R606	R2BSUJ472A	CARBON 4.7K 1/8WJ	1
				R607	R2BSUJ183A	CARBON 18K 1/8WJ	1
				R608	R2BSUJ390A	CARBON 39 1/8WJ	1
				R609	R2BSUJ121A	CARBON 120 1/8WJ	1
				R610	R2BSPJ471A	CARBON 470 1/8WJ	1
				R611	R2BSUJ101A	CARBON 100 1/8WJ	1
				R612	R2BSUJ821A	CARBON 820 1/8WJ	1
				R613	R2BSUJ100A	CARBON 10 1/8WJ	1
				R614	R2BSPJ183A	CARBON 18K 1/8WJ	1
				R615	R2BSPJ472A	CARBON 4.7K 1/8WJ	1
				R616	R2BSUJ472A	CARBON 4.7K 1/8WJ	1
				R617	R2BSUJ272A	CARBON 2.7K 1/8WJ	1
				R618	R2BSUJ182A	CARBON 1.8K 1/8WJ	1
				R619	R2BSPJ564A	CARBON 560K 1/8WJ	1
				R701	R2HCPK101A	SOLID 100 1/2WK	1
				R702	R2BSPJ222A	CARBON 2.2K 1/8WJ	1
				R703	R2BSPJ122A	CARBON 1.2K 1/8WJ	1
				R705	R2BSUJ221A	CARBON 220 1/8WJ	1
FIXED RESISTORS				TUBES AND SEMICONDUCTORS			
R001	R2BSUJ222A	CARBON 2.2K 1/8WJ	1	D001	4 2021 18770	SI DIODE MA56	1
R002	R2BSUJ472A	CARBON 4.7K 1/8WJ	1	D101	4 2021 07470	SI DIODE 1S2076	1
R003	R2BSUJ222A	CARBON 2.2K 1/8WJ	1	D102	4 2021 07470	SI DIODE 1S2076	1
R101	R2BSUJ123A	CARBON 12K 1/8WJ	1	D103	4 2020 03500	GE DIODE 1S188TV	1
R102	R2BSUJ272A	CARBON 2.7K 1/8WJ	1	D104	4 2020 03500	GE DIODE 1S188TV	1
R104	R2BSUJ221A	CARBON 220 1/8WJ	1	D501	4 2021 07470	SI DIODE 1S2076	1
R105	R2BSUJ561A	CARBON 560 1/8WJ	1	D502	4 2021 07470	SI DIODE 1S2076	1
R106	R2BSUJ101A	CARBON 100 1/8WJ	1				
R107	R2BSUJ123A	CARBON 12K 1/8WJ	1				
R108	R2BSUJ272A	CARBON 2.7K 1/8WJ	1				
R109	R2BSUJ221A	CARBON 220 1/8WJ	1				
R110	R2BSUJ682A	CARBON 6.8K 1/8WJ	1				
R111	R2BSUJ152A	CARBON 1.5K 1/8WJ	1				
R112	R2BSPJ121A	CARBON 120 1/8WJ	1				
R113	R2BSUJ123A	CARBON 12K 1/8WJ	1				
R114	R2BSUJ222A	CARBON 2.2K 1/8WJ	1				
R115	R2BSUJ271A	CARBON 270 1/8WJ	1				
R116	R2BSUJ182A	CARBON 1.8K 1/8WJ	1				
R117	R2BSUJ182A	CARBON 1.8K 1/8WJ	1				
R118	R2BSUJ101A	CARBON 100 1/8WJ	1				
R119	R2BSUJ682A	CARBON 6.8K 1/8WJ	1				
R120	R2BSUJ2R2A	CARBON 2.2 1/8WJ	1				
R121	R2BSUJ152A	CARBON 1.5K 1/8WJ	1				
R122	R2BSUJ271A	CARBON 270 1/8WJ	1				
R123	R2BSUJ152A	CARBON 1.5K 1/8WJ	1				
R124	R2BSUJ183A	CARBON 18K 1/8WJ	1				
R125	R2BSUJ823A	CARBON 82K 1/8WJ	1				
R126	R2BSUJ332A	CARBON 3.3K 1/8WJ	1				
R127	R2BSUJ821A	CARBON 820 1/8WJ	1				
R128	R2BSUJ223A	CARBON 22K 1/8WJ	1				
R129	R2BSUJ332A	CARBON 3.3K 1/8WJ	1				
R130	R2BSUJ102A	CARBON 1K 1/8WJ	1				
R131	R2BSUJ821A	CARBON 820 1/8WJ	1				

NOTICE: 1. Parts orders must contain Model Number, Parts Number and Description.  
2. Ordering quantity of resistors must be multiple of 10pcs.  
3. Component parts indicated by parentheses in the column Q'ty are not available.

# PARTS LIST

Schematic Location	Parts No.	Description	Q'ty	Schematic Location	Parts No.	Description	Q'ty
D503	4 2021 07470	SI DIODE 1S2076	1	C307	C1EYDK103C--	CERAMIC 0.01M C 25V	1
D601	4 2020 03500	GE DIODE 1S188TV	1	C308	C1EYDK473C--	CERAMIC 0.047M C 25V	1
D602	4 2020 03500	GE DIODE 1S188TV	1	C309	C1EYDK103C--	CERAMIC 0.01M C 25V	1
D603	4 2020 03500	GE DIODE 1S188TV	1	C310	C1EYDK473C--	CERAMIC 0.047M C 25V	1
D604	4 2021 17370	SI DIODE W09C	1	C311	C1ETDM105A--	TANTAL 1M 25V	1
D605	4 2021 07670	SI DIODE 1S2076A	1	C312	C1HCDK330RH--	CERAMIC 33P RH 50V	1
D606	4 2021 07670	SI DIODE 1S2076A	1	C313	C1HYDK221W--	CERAMIC 220P W 50V	1
D607	4 2021 07470	SI DIODE 1S2076	1	C314	C1EYDK473C--	CERAMIC 0.047M C 25V	1
D608	4 2021 20770	ZE DIODE RD4.3E	1	C315	C0JRE-107A--	ELECT 100M 6.3V	1
D701	4 2020 03500	GE DIODE 1S188TV	1	C316	C1CRE-106A--	ELECT 10M 16V	1
D702	4 2021 21170	ZE DIODE RD7.5EB2	1	C317	C1EYDK222C--	CERAMIC 2200P C 25V	1
D703	4 2021 07470	SI DIODE 1S2076	1	C318	C1EYDK103C--	CERAMIC 0.01M C 25V	1
D704	4 2021 07470	SI DIODE 1S2076	1	C319	C0JRE-476A--	ELECT 47M 6.3V	1
D705	4 2021 07470	SI DIODE 1S2076	1	C320	C1HFRK683A--	MYLAR 0.068M 50V	1
IC601	4 2021 10970	IC ZE DIODE UPC574J	1	C321	C0JRE-477A--	ELECT 470M 6.3V	1
Q101	TG2SC930SPE--	SI TR 2SC930SP	1	C322	C0JRE-107A--	ELECT 100M 6.3V	1
Q102	TG2SC2057-E1-	SI TR 2SC2057	1	C323	C1EYDK473C--	CERAMIC 0.047M C 25V	1
Q103	TG2SC930SPE--	SI TR 2SC930SP	1	C324	C0JTD476A--	TANTAL 47M 6.3V	1
Q104	TG2SC930SPE--	SI TR 2SC930SP	1	C325	C1EYDK472C--	CERAMIC 4700P C 25V	1
Q105	TG2SC930SPE--	SI TR 2SC930SP	1	C326	C1EYDK473C--	CERAMIC 0.047M C 25V	1
Q106	TG2SA608SPF--	SI TR 2SA608SP	1	C327	C1HCDK330RH--	CERAMIC 33P RH 50V	1
Q107	TG2SC536SPE--	SI TR 2SC536SP	1	C328	C1HCDK2R0RH--	CERAMIC 2P RH 50V	1
Q108	TG2SA608SPF--	SI TR 2SA608SP	1	C329	C1EYDK223C--	CERAMIC 0.022M C 25V	1
Q201	TG2SC536SP--	SI TR 2SC536SP	1	C330	C1EYDK223C--	CERAMIC 0.022M C 25V	1
or	TT2SC2458-GR-	SI TR 2SC2458	1	C331	C1EYDK472C--	CERAMIC 4700P C 25V	1
or	TT2SC2458-Y--	SI TR 2SC2458	1	D301	4 2021 20970	SI DIODE W03A	1
Q202	TG2SC536SP--	SI TR 2SC536SP	1	D302	4 2021 20870	ZE DIODE RD5.6EB1	1
or	TT2SC2458-GR-	SI TR 2SC2458	1	D303	4 2021 07470	SI DIODE 1S2076	1
or	TT2SC2458-Y--	SI TR 2SC2458	1	D304	4 2021 07470	SI DIODE 1S2076	1
Q203	TN2SC945--P--	SI TR 2SC945	1	D305	4 2021 07470	SI DIODE 1S2076	1
or	TN2SC945--Q--	SI TR 2SC945	1	D306	4 2021 07470	SI DIODE 1S2076	1
Q401	TG2SA608SPE--	SI TR 2SA608SP	1	D307	4 2021 07470	SI DIODE 1S2076	1
Q501	TG2SC536--F--	SI TR 2SC536	1	IC301	4 2061 09670	IC-HA11229	1
Q502	TG2SC536SPF--	SI TR 2SC536SP	1	IC302	4 2061 09770	IC-LA4140	1
or	TT2SC2458-GR-	SI TR 2SC2458	1	L301	4 2721 02209	PEAKING COIL 220	1
Q503	TG2SC536SPF--	SI TR 2SC536SP	1	L302	4 2591 05370	FM PHASE COIL 68UH	1
or	TT2SC2458-GR-	SI TR 2SC2458	1	L303	4 2721 02209	PEAKING COIL 220	1
Q504	TG2SC536SPF--	SI TR 2SC536SP	1	Q301	TT2SC2236----	SI TR 2SC2236	1
or	TG2SC536SPG--	SI TR 2SC536SP	1	RBPF1	4 2531 12770	FM BAND PASS FILTER	1
or	TT2SC2458-BL-	SI TR 2SC2458	1	RCF1	4 2531 11871	CERAMIC FILTER 10.7M	1
or	TT2SC2458-GR-	SI TR 2SC2458	1	RCT1	4 2241 04770	TRIMMER CAP 7PMA	1
Q505	TG2SD545--F--	SI TR 2SD545	1	RCT2	4 2241 04570	TRIMMER CAP 20PMA	1
Q506	TG2SB598--F--	SI TR 2SB598	1	RCT3	4 2241 04770	TRIMMER CAP 7PMA	1
Q507	TG2SC536SPF--	SI TR 2SC536SP	1	RCT4	4 2241 04770	TRIMMER CAP 7PMA	1
or	TG2SC536SPG--	SI TR 2SC536SP	1	RC01	C1EYDK472C--	CERAMIC 4700P C 25V	1
or	TT2SC2458-GR-	SI TR 2SC2458	1	RC02	C1EYDK223C--	CERAMIC 0.022M C 25V	1
Q601	TG2SC536--F--	SI TR 2SC536	1	RC03	C1EYDK103C--	CERAMIC 0.01M C 25V	1
Q602	TG2SC536SPF--	SI TR 2SC536SP	1	RC04	C1EYDK223C--	CERAMIC 0.022M C 25V	1
or	TG2SC536SPG--	SI TR 2SC536SP	1	RC05	C1HCDK2R0RH--	CERAMIC 2P RH 50V	1
or	TT2SC2458-GR-	SI TR 2SC2458	1	RC07	C1HCDK5R0RH--	CERAMIC 5P RH 50V	1
Q603	TM2SC2264----	SI TR 2SC2264	1	RC08	C1HCDK2R0RH--	CERAMIC 2P RH 50V	1
Q701	TG2SD826----	SI TR 2SD826	1	RC09	C1HCDK220RH--	CERAMIC 22P RH 50V	1
Q702	TG2SC536SPF--	SI TR 2SC536SP	1	RC10	C1HYDK221W--	CERAMIC 220P W 50V	1
or	TG2SC536SPG--	SI TR 2SC536SP	1	RC11	C1EYDK103C--	CERAMIC 0.01M C 25V	1
or	TT2SC2458-GR-	SI TR 2SC2458	1	RC12	C1EYDK223C--	CERAMIC 0.022M C 25V	1
TH101	4 2041 05370	THERMISTOR SDT-35	1	RC13	C1HRE-105A--	ELECT 1M 50V	1
TH501	4 2041 04870	THERMISTOR SDT-1000	1	RC14	C1EYDK223C--	CERAMIC 0.022M C 25V	1
TH502	4 2041 05470	THERMISTOR SDT-02	1	RC15	C1EYDK223C--	CERAMIC 0.022M C 25V	1
TH601	4 2041 04770	THERMISTOR SDT-100	1	RC16	C1EYDK223C--	CERAMIC 0.022M C 25V	1
V201	QE-E2225----S	CRT E2225	1	RC17	C1HCDK2R0RH--	CERAMIC 2P RH 50V	1
or	QN-C205P4----S	CRT C205P4	1	RC18	C1HCDJ220RH--	CERAMIC 22P RH 50V	1
				RC19	C1HCDK150RH--	CERAMIC 15P RH 50V	1
				RC20	C1HCDK150RH--	CERAMIC 15P RH 50V	1
				RC21	C1EYDK223C--	CERAMIC 0.022M C 25V	1
				RC22	C1HCDK150RH--	CERAMIC 15P RH 50V	1
				RC23	C1EYDK103C--	CERAMIC 0.01M C 25V	1
				RC24	C1HCDK6R0RH--	CERAMIC 6P RH 50V	1
				RC25	C1EYDK223C--	CERAMIC 0.022M C 25V	1
CT301	4 2241 04570	TRIMMER CAP 20PMA	1	RC26	C1EYDK103C--	CERAMIC 0.01M C 25V	1
CT302	4 2241 04570	TRIMMER CAP 20PMA	1	RC27	C1ERE-475A--	ELECT 4.7M 25V	1
C301	C1EYDK223C--	CERAMIC 0.022M C 25V	1	RC28	C1HYDK221W--	CERAMIC 220P W 50V	1
C302	C0JRE-476A--	ELECT 47M 6.3V	1	RC29	C1HYDK221W--	CERAMIC 220P W 50V	1
C303	C0JTD476A--	TANTAL 47M 6.3V	1	RC30	C1EYDK223C--	CERAMIC 0.022M C 25V	1
C304	C1ERE-475A--	ELECT 4.7M 25V	1	RC31	C1HRE-474A--	ELECT 0.47M 50V	1
C305	C1EYDK473C--	CERAMIC 0.047M C 25V	1	RC32	C1EYDK223C--	CERAMIC 0.022M C 25V	1
C306	C1EYDK103C--	CERAMIC 0.01M C 25V	1	RC33	C1ERE-475A--	ELECT 4.7M 25V	1

## ELECTRICAL PARTS (RADIO/TV SIF)

- NOTICE: 1. Parts orders must contain Model Number, Parts Number and Description.  
2. Ordering quantity of resistors must be multiple of 10pcs.  
3. Component parts indicated by parentheses in the column Q'ty are not available.

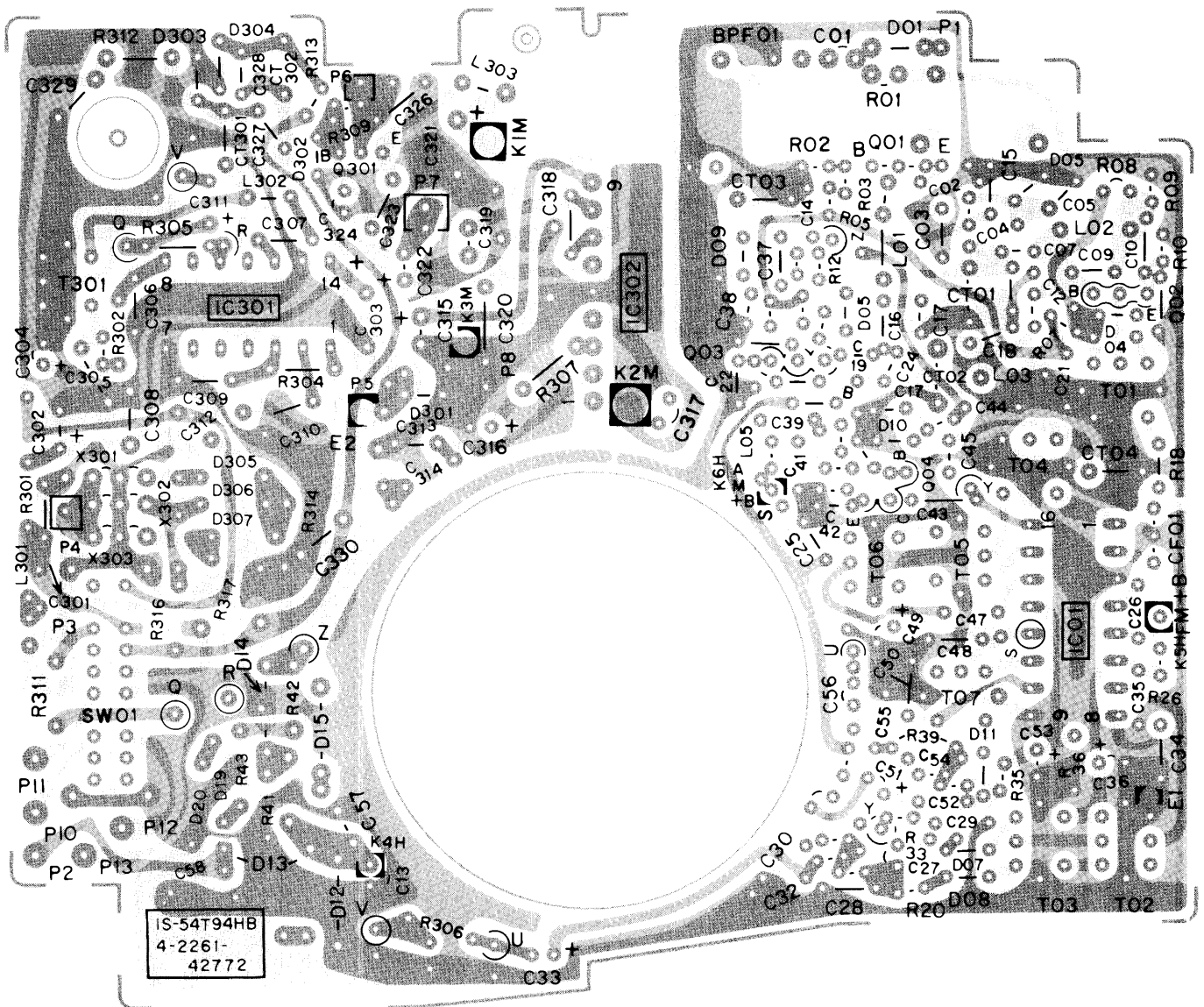
# PARTS LIST

Schematic Location	Parts No.	Description	Q'ty	Schematic Location	Parts No.	Description	Q'ty
RC34	C1EYDK223C--	CERAMIC 0.022M C 25V	1	RR23	R2BSUJ563A	CARBON 56K 1/8WJ	1
RC36	COJRE-107A--	ELECT 100M 6.3V	1	RR24	R2BSUJ334A	CARBON 330K 1/8WJ	1
RC37	C1EYDK223C--	CERAMIC 0.022M C 25V	1	RR25	R2BSUJ100A	CARBON 10 1/8WJ	1
RC38	C1HCD2R0RH-	CERAMIC 2P RH 50V	1	RR26	R2BSUJ470A	CARBON 47 1/8WJ	1
RC39	C1EYDK103C--	CERAMIC 0.01M C 25V	1	RR27	R2BSUJ124A	CARBON 120K 1/8WJ	1
RC41	C1EYDK223C--	CERAMIC 0.022M C 25V	1	RR28	R2BSUJ223A	CARBON 22K 1/8WJ	1
RC42	COJTD476A--	TANTAL 47M 6.3V	1	RR29	R2BSUJ182A	CARBON 1.8K 1/8WJ	1
RC43	C1EYDK102C--	CERAMIC 1000P C 25V	1	RR30	R2BSUJ822A	CARBON 8.2K 1/8WJ	1
RC44	C1EYDK223C--	CERAMIC 0.022M C 25V	1	RR31	R2BSUJ391A	CARBON 390 1/8WJ	1
RC45	C1HSEJ331A--	STYROL 330P 50V	1	RR32	R2BSUJ124A	CARBON 120K 1/8WJ	1
RC46	C1HCD2R0RH-	CERAMIC 2P RH 50V	1	RR33	R2BSUJ103A	CARBON 10K 1/8WJ	1
RC47	C1EYDK103C--	CERAMIC 0.01M C 25V	1	RR35	R2BSUJ562A	CARBON 5.6K 1/8WJ	1
RC48	C1EYDK473C--	CERAMIC 0.047M C 25V	1	RR36	R2BSUJ273A	CARBON 27K 1/8WJ	1
RC49	C1ARE-106A--	ELECT 10M 10V	1	RR37	R2BSUJ222A	CARBON 2.2K 1/8WJ	1
RC50	C1EYDK223C--	CERAMIC 0.022M C 25V	1	RR38	R2BSUJ472A	CARBON 4.7K 1/8WJ	1
RC51	C1ARE-226A--	ELECT 22M 10V	1	RR39	R2BSPJ102A	CARBON 1K 1/8WJ	1
RC52	C1EYDK103C--	CERAMIC 0.01M C 25V	1	RR40	R2BSPJ105A	CARBON 1M 1/8WJ	1
RC53	C1ERE-476A--	ELECT 47M 25V	1	RR41	R2BSPJ274A	CARBON 270K 1/8WJ	1
RC54	C1EYDK103C--	CERAMIC 0.01M C 25V	1	RR42	R2BSPJ104A	CARBON 100K 1/8WJ	1
RC55	C1EYDK223C--	CERAMIC 0.022M C 25V	1	RR43	R2BSPJ474A	CARBON 470K 1/8WJ	1
RC56	C1HDRK683C--	M-CERAMIC 0.068M 50V	1	RT01	4 2561 08970	FM IF TRANS	1
RC57	C1EYDK472C--	CERAMIC 4700P C 25V	1	RT02	4 2561 09070	FM IF TRANS	1
RC58	C1HYDP103Z--	CERAMIC 10000P Z 50V	1	RT03	4 2561 09170	FM IF TRANS	1
RC59	C1EYDK473C--	CERAMIC 0.047M C 25V	1	RT04	4 2561 09270	AM OSC TRANS	1
RC60	C1EYDK473C--	CERAMIC 0.047M C 25V	1	RT05	4 2561 09370	AM IF TRANS	1
RD01	4 2021 18770	SI DIODE MA56	1	RT06	4 2561 09470	AM IF TRANS	1
RD03	4 2021 20370	VARACTOR DI SVC201	1	RT07	4 2561 09570	AM IF TRANS	1
RD04	4 2021 07470	SI DIODE 1S2076	1	R301	R2BSPJ680A	CARBON 68 1/8WJ	1
RD05	4 2021 20370	VARACTOR DI SVC201	1	R302	R2BSPJ472A	CARBON 4.7K 1/8WJ	1
RD06	4 2021 15370	VARACTOR DIODE 1S553	1	R303	R2BSUJ223A	CARBON 22K 1/8WJ	1
RD07	4 2021 15270	GE DIODE 1S188FM	1	R304	R2BSPJ102A	CARBON 1K 1/8WJ	1
RD08	4 2021 15270	GE DIODE 1S188FM	1	R305	R2BSPJ822A	CARBON 8.2K 1/8WJ	1
RD09	4 2021 20470	VARACTOR DI SVC303	1	R306	R2BSPJ102A	CARBON 1K 1/8WJ	1
RD10	4 2021 20470	VARACTOR DI SVC303	1	R307	R2BSPJ151A	CARBON 150 1/8WJ	1
RD11	4 2021 15270	GE DIODE 1S188FM	1	R309	R2BSUJ821A	CARBON 820 1/8WJ	1
RD12	4 2021 20170	ZE DIODE RD10EB3	1	R311	R2BSPJ123A	CARBON 12K 1/8WJ	1
RD13	4 2021 07470	SI DIODE 1S2076	1	R312	R2BSPJ472A	CARBON 4.7K 1/8WJ	1
RD14	4 2021 07470	SI DIODE 1S2076	1	R313	R2BSPJ472A	CARBON 4.7K 1/8WJ	1
RD15	4 2021 07470	SI DIODE 1S2076	1	R314	R2BSPJ472A	CARBON 4.7K 1/8WJ	1
RD19	4 2021 07470	SI DIODE 1S2076	1	R315	R2BSPJ472A	CARBON 4.7K 1/8WJ	1
RD20	4 2021 07470	SI DIODE 1S2076	1	R316	R2BSPJ472A	CARBON 4.7K 1/8WJ	1
RL01	4 2061 08970	IC-UPC1018C	1	R317	R2BSPJ472A	CARBON 4.7K 1/8WJ	1
RL02	4 2591 05070	FM RF COIL	1	SW01	4 2311 10370	SLIDE SWITCH	1
RL03	4 2591 05270	FM TRAP COIL	1	T301	4 2561 94370	QUADRATURE COIL	1
RL04	4 2581 04770	FM OSC COIL	1	VR301	4 2221 34870	12FRN10FB-10K	1
RL05	4 2571 04870	BAR ANTENNA	1	X301	4 2531 10970	CERAMIC FILTER 4.5M	1
RL05	4 2721 00689	PEAKING COIL 68	1	X302	4 2531 11070	CERAMIC FILTER 5.5M	1
RQ01	TG2SC668--D--	SI TR 2SC668	1	X303	4 2531 11170	CERAMIC FILTER 6.0M	1
or	TG2SC668--E--	SI TR 2SC668	1	P1	111 0 9081 01014	1P MICRO SOCKET ASSY	1
RQ02	TG2SC668--D--	SI TR 2SC668	1	P3	111 0 9081 01015	1P MICRO SOCKET ASSY	1
or	TG2SC668--E--	SI TR 2SC668	1	P5	111 0 9081 01016	1P MICRO SOCKET ASSY	1
or	TT2SC2668----	SI TR 2SC2668	1	P6	111 0 9081 01017	1P MICRO SOCKET ASSY	1
RQ03	TG2SC930SPF--	SI TR 2SC930SP	1	P4	111 0 9081 01021	1P MICRO SOCKET ASSY	1
RQ04	TG2SC2210----	SI TR 2SC2210	1		111 0 9081 03036	3P M MICRO SOCKET AY	1
RR01	R2BSUJ472A	CARBON 4.7K 1/8WJ	1		111 9 1800 00750	SHIELD WIRE TMF-JPN	1
RR02	R2BSUJ154A	CARBON 150K 1/8WJ	1		111 2 6111 28270	RADIO SHLD PLATE-TMF	1
RR03	R2BSUJ393A	CARBON 39K 1/8WJ	1				
RR04	R2BSUJ102A	CARBON 1K 1/8WJ	1				
RR05	R2BSUJ221A	CARBON 220 1/8WJ	1				
RR06	R2BSUJ124A	CARBON 120K 1/8WJ	1				
RR07	R2BSUJ101A	CARBON 100 1/8WJ	1				
RR08	R2BSUJ223A	CARBON 22K 1/8WJ	1				
RR09	R2BSUJ223A	CARBON 22K 1/8WJ	1				
RR10	R2BSUJ152A	CARBON 1.5K 1/8WJ	1				
RR11	R2BSUJ101A	CARBON 100 1/8WJ	1				
RR12	R2BSUJ124A	CARBON 120K 1/8WJ	1				
RR13	R2BSUJ103A	CARBON 10K 1/8WJ	1				
RR14	R2BSUJ223A	CARBON 22K 1/8WJ	1				
RR15	R2BSUJ221A	CARBON 220 1/8WJ	1				
RR16	R2BSUJ272A	CARBON 2.7K 1/8WJ	1				
RR17	R2BSUJ334A	CARBON 330K 1/8WJ	1				
RR18	R2BSUJ471A	CARBON 470 1/8WJ	1				
RR19	R2BSUJ102A	CARBON 1K 1/8WJ	1				
RR20	R2BSUJ102A	CARBON 1K 1/8WJ	1				
RR21	R2BSUJ472A	CARBON 4.7K 1/8WJ	1				
RR22	R2BSUJ472A	CARBON 4.7K 1/8WJ	1				

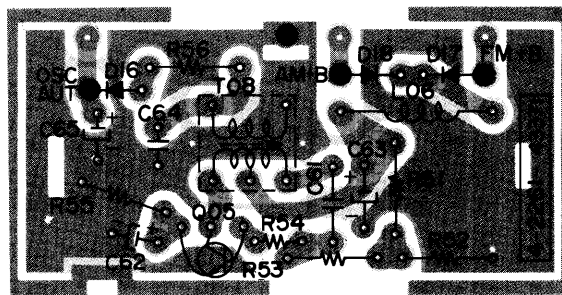
NOTICE: 1. Parts orders must contain Model Number, Parts Number and Description.  
2. Ordering quantity of resistors must be multiple of 10pcs.  
3. Component parts indicated by parentheses in the column Q'ty are not available.



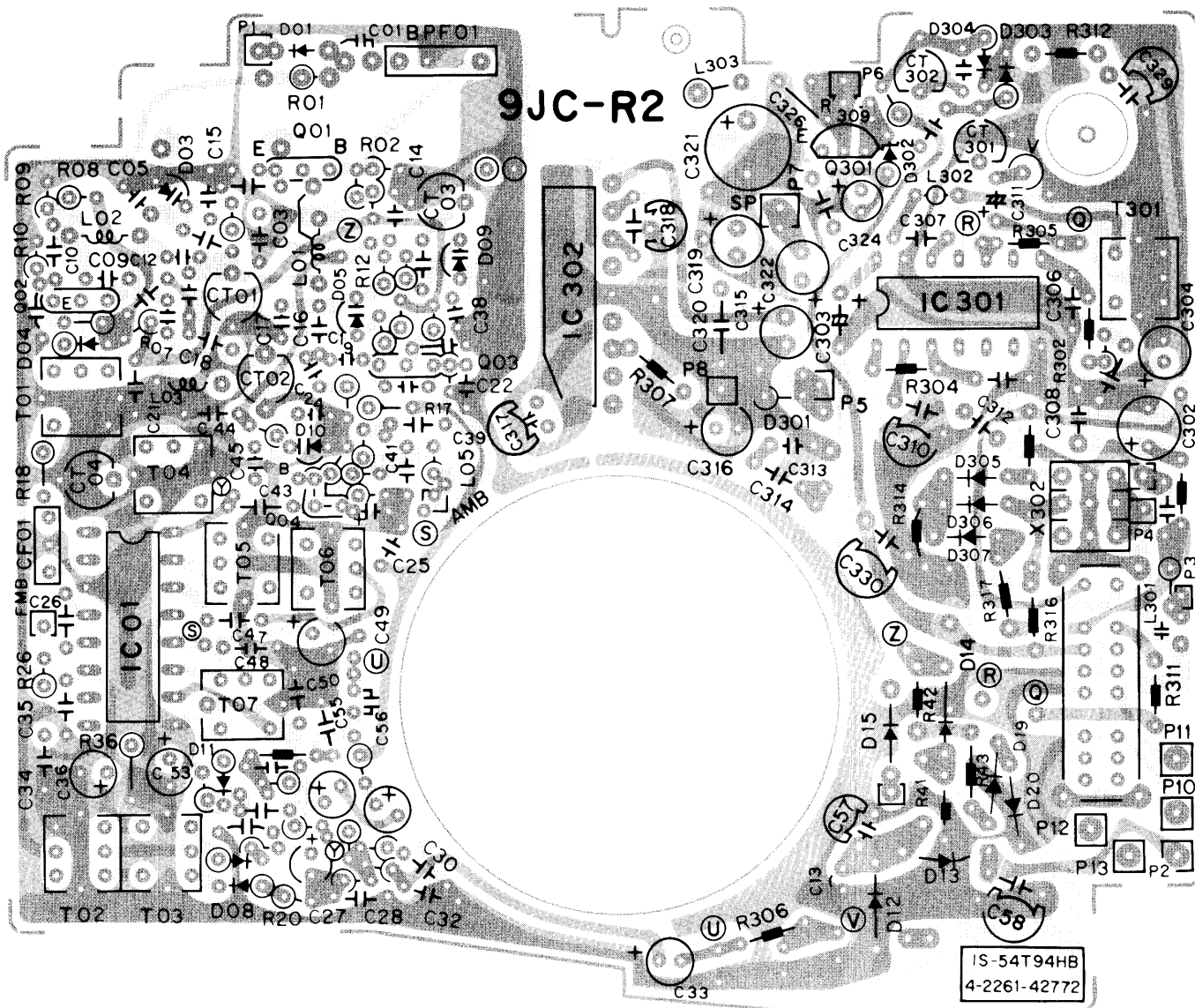
# CIRCUIT BOARD DIAGRAM (RADIO)



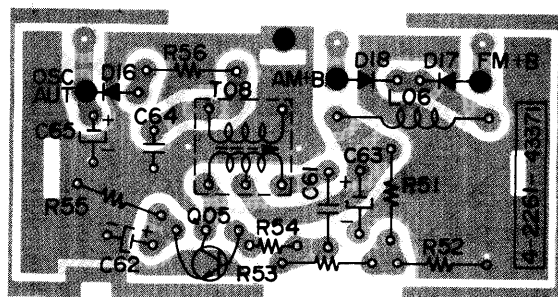
OSC BLOCK P.C.B.



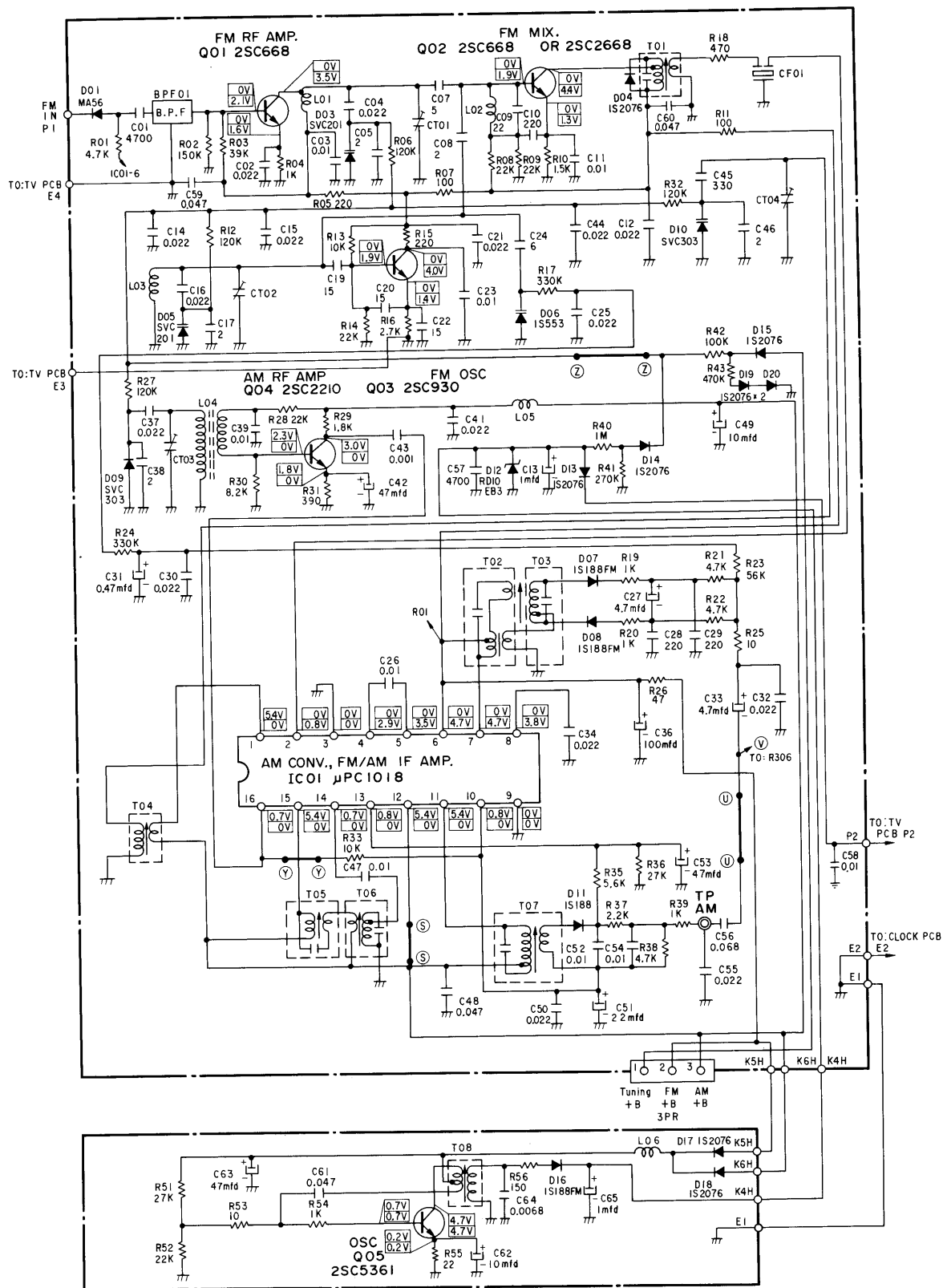
# CIRCUIT BOARD DIAGRAM (RADIO)



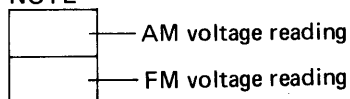
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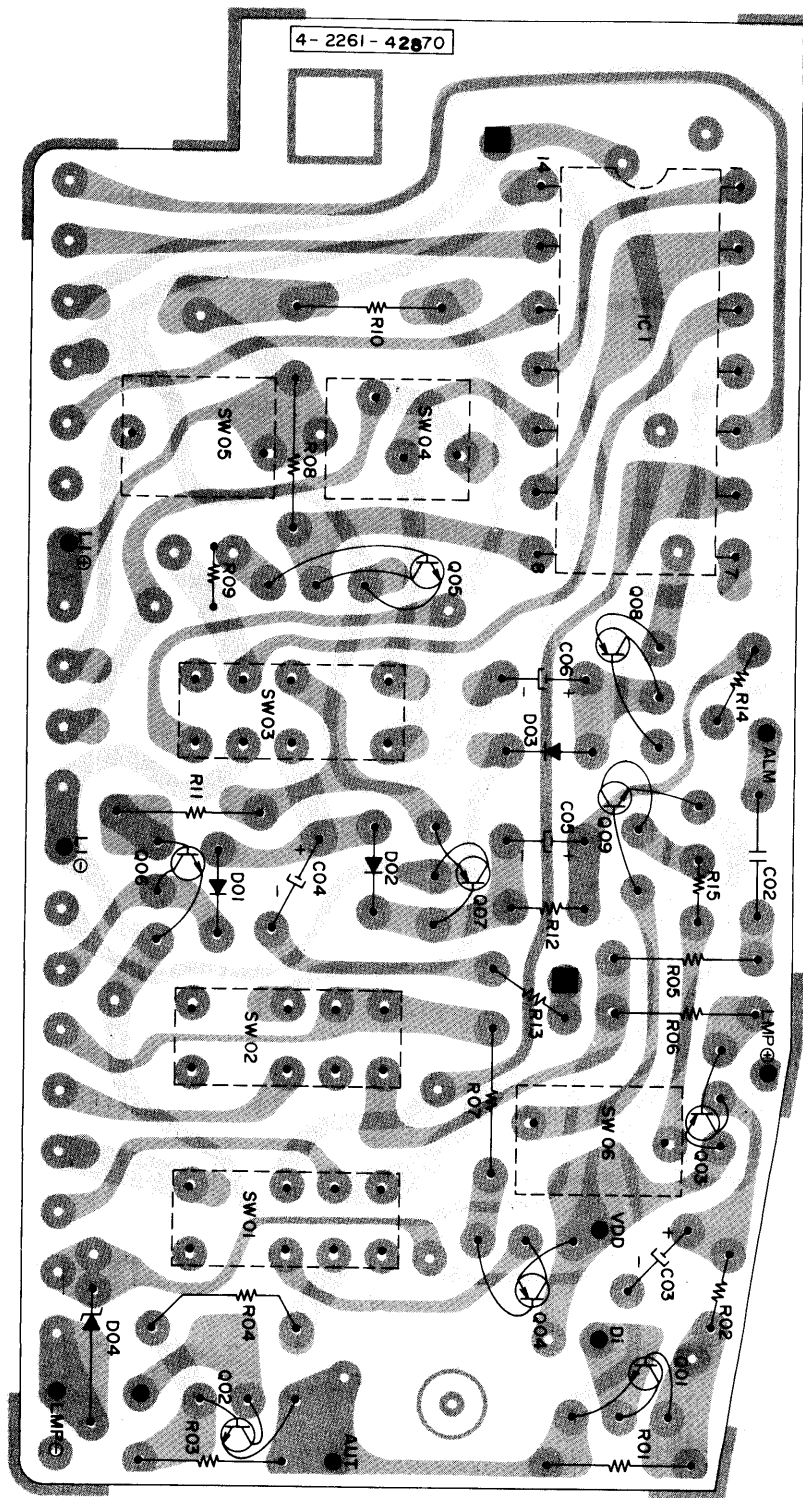
# SCHEMATIC DIAGRAM (RADIO)



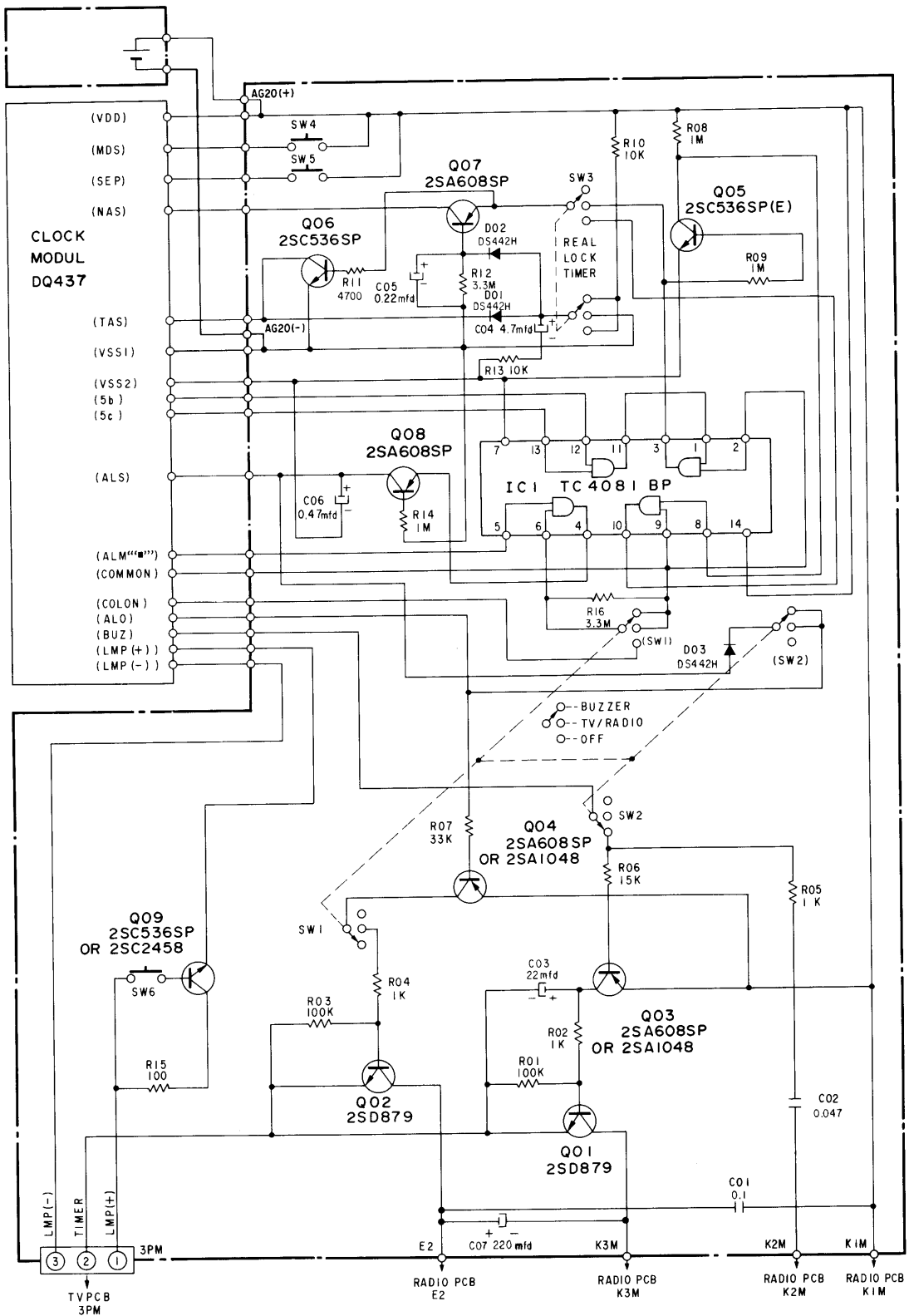
## NOTE



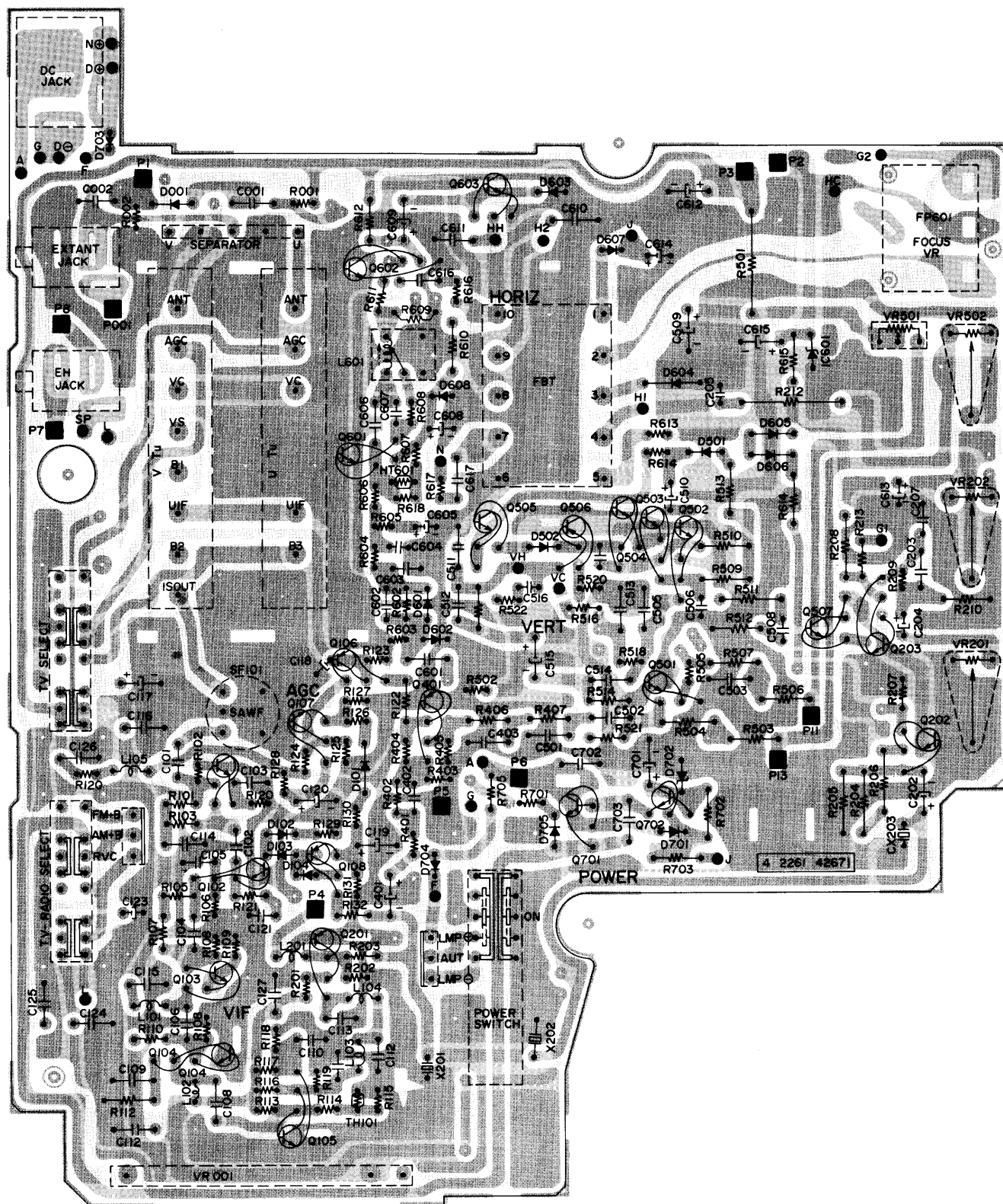
# CIRCUIT BOARD DIAGRAM (CLOCK CONTROL)



# SCHEMATIC DIAGRAM (CLOCK)



# CIRCUIT BOARD DIAGRAM (TV)





# SCHEMATIC DIAGRAM (TV)

## NOTES:

1. All resistance values in ohm.  
K = 1,000 M = 1,000,000
2. Unless otherwise noted in schematic diagram, all capacitors less than 1 are expressed in mfd, and the values larger than 1 are in pF.
3. Voltage reading taken with "VTVM" from point indicated to chassis ground, tuner on unused channel, contrast at max., other controls at normal, local line voltage.
4. All waveforms measured with strong signal input, contrast set to give normal picture.
5. Voltage reading may vary  $\pm 20\%$ .
6. This is a fundamental circuit diagram. Some production changes may be made without revision of the diagram.

